

Atari Interface Magazine

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VOLUME 13, 117 07/15/91

Sept. 1991

ATARI INTERFACE

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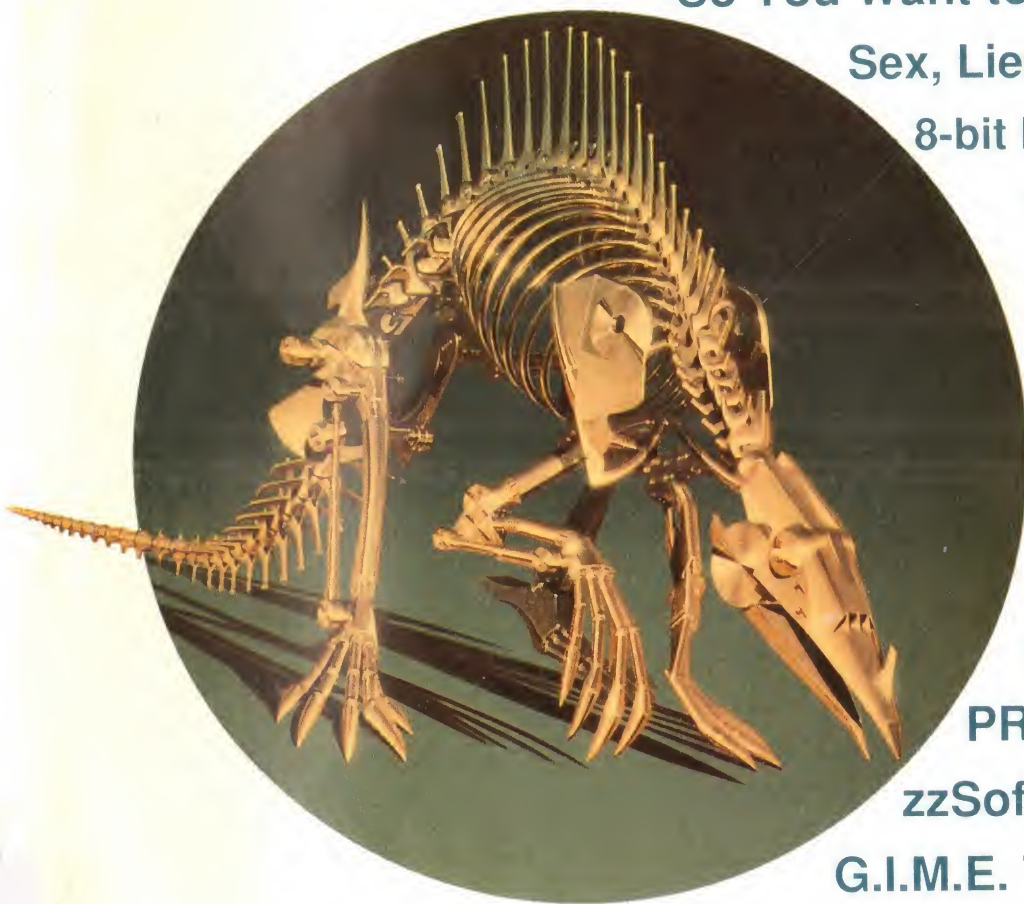
Sex, Lies and Graphics/Video

8-bit Player Missile Graphics

SpartaDOS vs. MyDOS

MIST III Show Report

Right on Target



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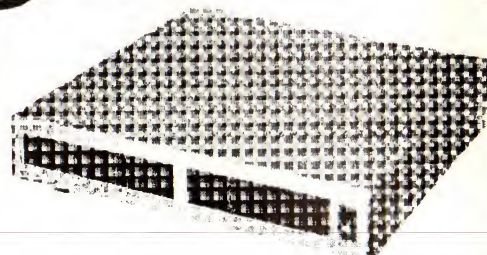
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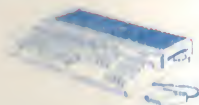
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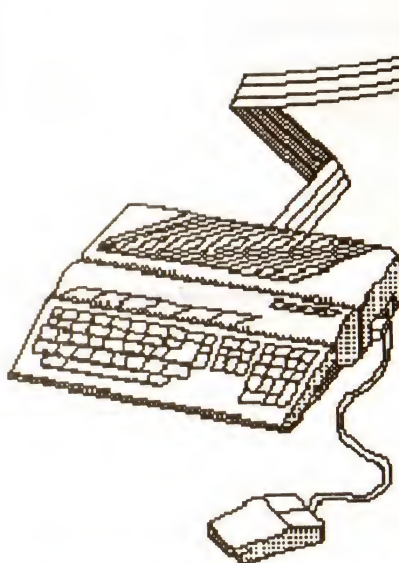
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Volume 3



ATARI

Your Connection to the

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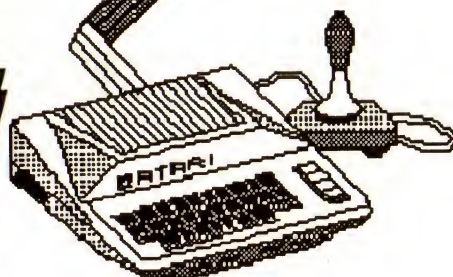
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INTERFACE



Atari Users Community

Sept. 1991

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CRAIG Merrillville, IN	RACC Rockford, IL	WAUG Windsor, Ontario, Canada
CUSTUG Champaign-Urbana, IL	RACE Fremont, MT	WNYAUG Buffalo, NY

ATARI INTERFACE

Your Connection to the
Atari Users Community

Publishers

Bill Rayl / Patricia Snyder-Rayl

Managing Editor — Patricia Snyder-Rayl

Editor — Bill Rayl

Contributing Editors — Dave Plotkin, Jay Craswell, Dave Stewart, Tim Holt

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Opinions expressed within articles in this magazine are solely the views of the author(s) and do not necessarily represent the opinions of Unicorn Publications, Atari Interface staff or any participating club.

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EDITORIAL RAMBLINGS

THIS ISSUE OF Atari Interface puts us back on track with both stores and clubs! It was hard getting back in step once we were out of synch, but we did it. The only delay now is in the mailing process, and we did some checking into that recently.

As some of you may recall, we asked our readers about spending money on improving the magazine or upgrading to second class mailing. The overwhelming response was to keep improving the appearance and content of the publication, which we will keep doing. A few voices were raised in support of going to 2nd class—mostly from clubs and readers on the east and west coasts. Well, come to find out, since we offer such a discount to the clubs who participate with AIM, we've all but tied our hands when it comes to second class mail.

According to US Postal regulations (we got to read the whole exciting chapter on 2nd class mail!), we would have to get a form from each and every member of each and every of our 80 clubs stating how much club membership dues were and how much of that was sent to us each year. The US Post Office states that it is preferable that all subscriptions be signed up with us directly. Because about 2,500 copies are sent to members of clubs at what the Post Office considers a "nominal fee," we can't go to 2nd class mailings without forms from everyone.

However, we are willing to offer the service of mailing the magazine to readers by 1st class mail. This, of course, costs more—an additional \$2 per magazine (see our subscription form for more details). You would get the magazine a bit faster each month, plus it would be sent in an envelope, and some people have complained about their issues being a little worn by the time it reaches their mailbox. This may not be for everyone, but we want to offer this service for those to whom it makes a difference.

One last thought: if you move, the Post Office will not forward your 3rd mail unless you tell them you're willing to *pay* them to do it. So, be sure to get your new address to your officers or to us as soon as you know it! Also, clubs may wish to get a few extra copies each month if they aren't already doing so. This gives new members something to read until their subscription starts, and covers those people who lost an issue in the mail for whatever reason.

Bill & Pattie Rayl

From The Reader's Viewpoint



SyQuest Backup

No doubt about it, Atari users are happy with the SyQuest 44. SyQuest is aware of that satisfaction, and the company seems willing to provide all support required to increase the popularity of their products.

My interest in the SyQuest SQ555 Removable Cartridge Disk Drive is diverse. At Machine Specific Software, we are developing programs to copy entire partitions between fixed and removable drives, in all combinations—that is, fixed to fixed same/different drive, cartridge to cartridge same/different drive, fixed to cartridge and cartridge to fixed. Our programs are best suited for backup and reorganization.

We have attained copy speeds of 16 megs/minute partition to partition on the same cartridge, 21 megs/minute between partitions on a Maxtor 210 megabyte, 18 megs/minute between the Maxtor and SyQuest cartridge and 14 megs/minute between a Seagate 251-1 and cartridge.

We verify the correctness of the copy with a compare algorithm that executes at speeds between 9 and 12 megabytes/minute with a CPU clock speed of 8 megahertz.

In addition to the basic program, which copies between partitions having fixed logical sectors of 512 bytes, we have an enhanced version which copies between partitions having identical sector sizes up to 8192 bytes.

A third program copies data between partitions having differ-

ing logical sector sizes. All programs are in final beta test. You can express your interest by writing to the address below.

Robert C. Arp, Jr.
Machine Specific Software
278-1 San Tomas Aquino Rd.
Campbell, CA 95008
(408) 370-9039

Late Issue

I know that you are receiving some flack about being late. Those who are criticizing obviously don't know what is involved in putting out a professional magazine, espe-

cially with as little help as you must have.

I want you to know that we in AAAUA are solidly behind you and hope that you don't become discouraged. Hang in there and do the best you can. While I am sure you are in this to make a dollar, you are also carrying a moral banner. A banner that many others did not have the fortitude or loyalty to carry. You have a *great* idea. Don't let it die!

We have been receiving both the ST and 8-bit PD disks for which we thank you. They are great!

Alvin Sherrill (AAAUA)

SOFTWARE
PIRACY
hurts
BIG companies.
But it *KILLS*
small companies.

Have you ever heard this rationalization for stealing? "Big software companies aren't hurt by one or two pirate copies of their programs."

Well, the truth is that many of the best Atari software houses are NOT big companies — they're small businesses with few employees. Many of the best programmers and developers are Atari enthusiasts like you. And the loss of just a few sales due to software theft can help drive them out of this comparatively small market.

The next time you're tempted to give or receive a copy of a commercial program, consider how piracy affects Atari software developers and the future of Atari computers.

THE
IAAD Independent
Association of
Atari Developers



ATARI BULLETIN BOARD

Bill & Pattie Rayl

Atari News

Bob Brodie has a new title! As "Director of Communications," Bob is now in charge of PR and ad placements for the computer division. This is an extension of his past responsibilities as Manager of User Group Services.

You can be sure that Bob will continue his appearances at shows and user group get-togethers, but now he has the chance to work some of that "Brodie Magic" in a wider arena.

Congratulations, Bob, on a well-deserved "promotion."

The Atari Portfolio made its big screen debut in the smash hit movie Terminator 2, Judgment Day. The Portfolio serves a crucial function in the movie, contributing to the saving of the world. Although not blatantly displayed, the Atari name does (mostly) get shown on-screen at least once in the movie.

Not to be outdone, STs have been appearing in some recent TV episodes of Growing Pains, The Flash, Night Court, Working Girl, etc.

The Atari TT030 is going to be used for creation of graphics and animations for the SFA-Network, a science fiction cable channel that should (hopefully) be available near the end of 1991. Atari has reportedly delivered one TT to SFA-Network and a Mega/STE to the channel's spokesman, Walter Koenig (Star Trek's Chekov).

Mike Kelly, President of SFA-Network says they are looking for artists and animators familiar with

the ST and TT computers. Give 'em a call at (512) 440-1092 for details on how and what to submit in the way of a "portfolio" if interested.

Plans for Atari to open a production facility in Israel have seemingly fallen through. According to the July 25 issue of the San Francisco Chronicle, "Atari Corp. has canceled plans to build a \$53 million computer plant in Israel because of government bureaucracy, Israeli officials said." Atari is currently using contracted builders, having sold their Taiwan factory a few months ago for \$60 million.

Developer News

Andest Communications of Milton Keynes, England has released a pocket modem for the Portfolio. Andest also has a telecommunications program for the Portfolio that supports VT52 and VT100 emulation, as well as Kermit, Xmodem and ASCII file transfers. The modem is currently being bundled with the Portfolio in the UK.

PageStream 2.1 has shipped to owners who took advantage of the \$75 upgrade deal. The new version features the ability to print Type 1 Postscript fonts to ANY printer, easy "bleeding" of text and objects within a user-definable bleed area, real CMYK color definition and much more.

Retail price is \$299.95 and owners of PageStream 1.8 can upgrade for \$100. Call Soft-Logik at (800) 829-8608 for more information.

Maxwell CPU is selling Silhouette version 1.0 for \$69.95. Silhouette is a graphics manipulation/paint program with many

unique features. One of its most prominent features is its "Auto-tracing" capabilities. Silhouette supports GDOS and Atari's soon-to-be-released FSMGDOS fonts, and the software can load IMG, DEGAS, TNY, MacPaint and GEM formats. Graphics can be output in IMG, GEM or DXF (CAD) formats.

Maxwell CPU, PO Box 576, Louisville, CO 80027, (303) 666-7754.

Lexicor Software and CompuServe's Atari Forums have begun the long-awaited online animation classes. Classes are held each Saturday at 5PM Eastern in the Lexicor conference room of the ATARIVEN Forum.

The classes include lectures and homework assignments for specific topics, with lecture text and files for all classes available for download.

Innovative Concepts of Warren, Michigan is having a "Super Summer Sizzler Sale" until September 31. The list of 8-bit and ST hardware and software on sale for fairly attractive prices would fill a few pages of this magazine! And some of the stuff they're selling is pretty hard to find.

For a complete list, download their file from CompuServe, GENie or their BBS (313) 978-1685...or contact Innovative Concepts at (313) 293-0730. If you're an 8-bit owner, you'll be sorry if you miss this sale!

The "Summer Savings Issue 1991" DAMARK catalog has the Atari SX212 modem for sale for only \$19.99!

This 1200 baud Hayes-compatible modem comes with SIO cable for connection to the 8-bit Atari. The SX212 also has a standard RS-232 port for connection to the ST or

other computers. To place an order, call DAMARK at (800) 729-9000 and ask for Item #B-374-181504.

A new game for the Atari 8-bit is due to be released in September by Aerion Software. Titled "FURY: The Wrath of Taijun Cathu," photos we've received of this game look great!

The game features five "worlds" with 20 "rooms"



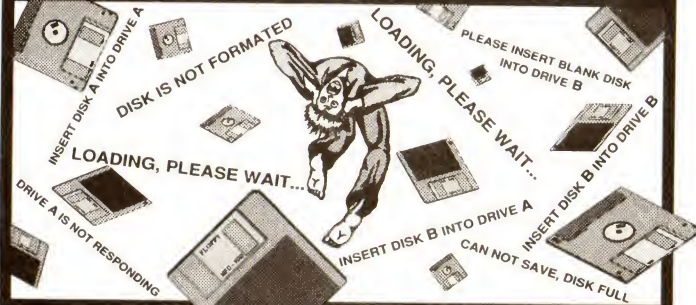
per world. On each level, you must defeat the "keeper of the key" in order to enter the room that gives you passage to the next world...but, beware of the "guardian of passage" in each room! Along the way, you pick up treasure chests, coins and food. A shop on each level lets you spend that hard earned money to buy better weapons and health points.

Aerion Software Ltd., PO Box 1222, Riverdale Station, New York, NY 10471.

Another new release for the 8-bit Atari are the ChromaCAD 3-D Model Builder and Surface Shader XE packages from Palette Imaging. Some of the results from this software is very impressive. (See the ad from Palette Imaging elsewhere in this issue.) The software is available now...in fact, we have a copy of both packages. At \$29.95 each, these packages are a steal.

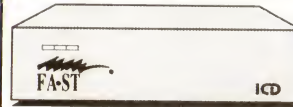
Palette Imaging, 1 Closter Commons STE 789, Closter, NJ 07624-0400, (201) 767-3913.

DRIVE AWAY THE DISK SWAPPING NIGHTMARE



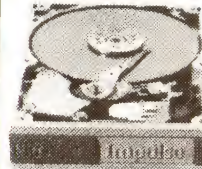
WITH A HARD DRIVE FROM POWER COMPUTING

Are you searching a mountain of floppies for lost files, suffering from annoying file loading delays, making monotonous disk changes to SAVE your work, and enduring frustrating hunts for blank formatted disks? If using your floppy drive is like a bad dream, drive away the disk swapping nightmare with a hard drive from POWER COMPUTING. How did you last this long without one?



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Right on Target



David Plotkin
Contributing Editor

**There isn't
really any
reason why
the ST can't
have a multi-
tasking
operating
system.
There is no
inherent
limitation in
the processor.**

I can't wait for the day when the ST can do true multi-tasking.

What multi-tasking refers to is the ability to run multiple programs at once. What distinguishes true multi-tasking from "context shifting" is that, with context shifting, you have multiple programs loaded at one time, but only one is running.

When you switch to one of the other programs (usually via some kind of key-press sequence), the program switched away from stops dead in its tracks. Nothing is lost (if context switching is implemented properly), but if you were in the middle of recalculating a long spreadsheet when you switched away, you are still there when you return to the spreadsheet program.

Context switching is handy, and there are a number of programs that allow it. The ones that come to mind are Juggler and Revolver. Both work by partitioning your ST into "virtual machines." Each partition thinks it's the whole machine.

This can work so well that you can actually crash one of your partitions and still have the other ones work (although I don't recommend proceeding this way). Of course, the memory in your machine must also be partitioned between the applications. Thus, running Juggler or Revolver on my 4-meg machine results in four 1-meg machines.

There are some inherent problems with context switching, however. The first is that the only program running is the currently active one. This isn't a big problem until you consider that one of the most time-consuming things that some people do is download files from a BBS.

Switching away from the telecommunications program stops that process, usually breaking the connection after a short while. Also, with the partitioning scheme, you will never be able to cut in-

formation from one application (in one partition) and paste it into another. Of course, a multi-application cut-and-paste clipboard has never been fully supported on the ST anyway. This is too bad, as it is one of the most useful features of the Macintosh.

Multi-Tasking Done Right

True multi-tasking allows multiple programs to run at the same time—often in their own windows on the screen. With multi-tasking, you can start a lengthy download, then go work on some other task.

A properly designed multi-tasking environment usually supports a multi-application clipboard, allowing cutting and pasting of information. This can be implemented even when the application in question doesn't support clipboards at all!

For example, Windows 3 on the PC allows you to cut information from a DOS application or window, which it then stores in a buffer. When you go to some other application (including another DOS application), Windows can paste the information in by loading the stored buffer into the keyboard buffer one character at a time. It's kind of eerie to watch your PC type the information in all by itself!

What About the ST?

There isn't really any reason why the ST can't have a multi-tasking operating system. There is no inherent limitation in the processor (the Amiga uses the same processor, and it *does* multi-task, as does the Mac with the advent of System 7). On the PC, the 80x86 line of processors couldn't really multi-task without special help until the advent of the 80386.

But the 68000 can. It won't be really snappy, because the chip is aging and, by today's standards, isn't very fast.

Still, you could upgrade to one of the accelerated chips available to improve performance.

The magic for multi-tasking is in the operating system. GEM is not a multi-tasking operating system, so something else would have to be built. That "something else" may be Rimik's MultiGEM, which I have yet to see, but have heard good things about. From the descriptions, it does most of what a multi-tasking operating system should, including allowing TOS programs to run in a window (much the way Windows 3 allows DOS programs to run in a window).

Why Multi-Task?

Once you have tried multi-tasking, you are spoiled for life. This may not be clear to you until you have tried it—for years I couldn't imagine why anybody would want to multi-task. After all, I can only do one thing at a time. Why should my computer be able to do more? This seems rational until you think about your everyday life. *You* may not multi-task, but with the help of the machines around you, it can seem that you do. You throw the dirty clothes in the washing machine, flip on the fan in front of the window and go start dinner. Are you multi-tasking? Well, there are three tasks going on at once—the clothes are getting cleaned, the house is getting cooled and the dinner is getting made. You figure it out.

Multi-tasking is especially useful in a work situation, where someone can walk into your office at any time and ask for something. Instead of shutting down whatever you are doing, you just start the program that lets you answer the question, then go back to whatever you were doing. No muss, no fuss. It can get very addicting.

The down side of multi-tasking is that no matter how carefully the operating system is programmed, some programs are going to break. This is especially true of programs that "break the rules." With Apple's System 7 (the first true multi-tasking operating system for the Mac), quite a few programs "broke" and updates had to be rushed out for them. Why, even our beloved Spectre GCR broke when System 7 came out.

Another good example of the difficulties of writing a multi-tasking operating system that runs with "normal" programs is Windows on the PC. Even with Windows 3 (where Microsoft had three releases and six years to get it right) there are programs that absolutely refuse to run.

This difficulty is accentuated on the ST, where not only do many programs break the rules, but the software companies that wrote them are either gone or no longer interested in supporting the ST. Can you imagine Timeworks updating Publisher ST to support MultiGEM? Still, it would be wonderful to have the option for the many programs that would work. Ideally, you could choose to run the multi-tasking operating system or not, just as you can choose not to run Windows on the PC.

See you next month!

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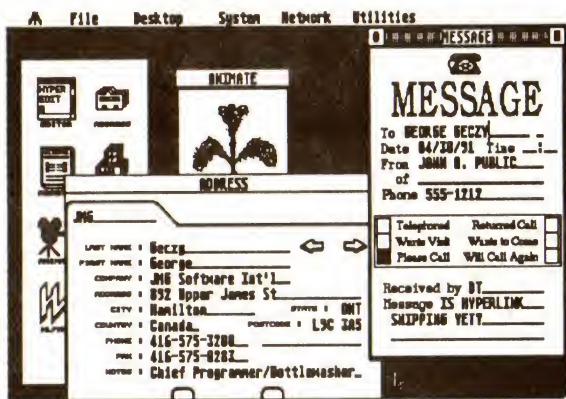
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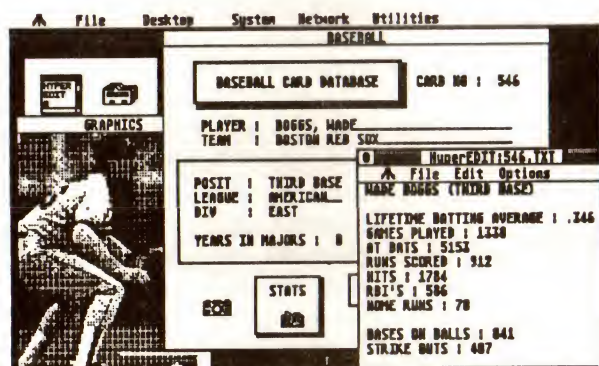
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MIST III Show Report

Patricia Snyder-Rayl

Looks like there's just enough time to squeeze in a report about the recent MIST show before we send the magazine off to the printer, so here we go!

The third annual MIST show was held in Indianapolis, Indiana the weekend of July 27th and was a good little show! The three clubs hosting the show obtained a large conference area with a large room for vendors/developers, a smaller room for club displays and a good-sized seminar room.

Seminars included talks about Lexicor's Prism Paint and Chronos by Bill Rayl, Editing with EdHak by Craig Harvey, and CompuServe and Telecommunications with Bob Retelle. The folks at MegaType showed off their fonts and, to top it all off, there was a special talk by Atari's Bob Brodie.

Bob Brodie's table was featured prominently among the 21 different vendor booths. These included Atari dealers One Stop from Chicago, Randall's Home Computers from St. Louis, Computer Works from Carmel, CAL COM from Kokomo and Mars Merchandising from Chicago.

Vendors

Hardware-oriented companies were represented by ICD, Inc., Touch Technologies and AT/Com Electronics. Graphics-oriented companies at the show were Wiz Works, M-S Designs, MegaType, Electronic Spinster Graphics and SKWare One. Application-oriented companies included Soft-Logik, Gribnif, MP Graphics Sys-



tems (representing ISD), Clear Thinking, DA Brumleve and Apprentice Software, leaving only the CompuServe and Atari Interface booths in the miscellaneous category.

Cin'tari, LCACE, STar, EAUG and MAST—as well as the three hosting clubs ASCII, BLAST and PAUG—all had booths showing various PD/shareware programs and graphics demos.

I know many other clubs were represented in the crowd of showgoers because I got to meet quite a few of 'em! One gentleman from BRACE (KY) introduced himself, and I saw people from the SAGE and WACO (PA) clubs, too.

The official estimate had about 275-300 people attending this one-day show, with attendees coming from Kentucky, Illinois, Missouri, Michigan, Ohio, Pennsylvania and probably more states!

Booty!

Door prizes included products for the TT to the Lynx! Atari donated a Migraph Hand Scanner with TouchUp and six sets of TOS 1.4. ISD gave away Calamus, Outline Art and a Guide to Calamus

Desktop Publishing. Soft-Logik donated a copy of PageStream 2.1 and two copies of Font Pack 1, Font Plus Pack and Business Forms. Other font packages contributed included fonts from Sol Gruber and M-S Designs Multi-Font Pack (with 34 different fonts).

MissionWare gave away a copy of LottODDS and their Printer Initializer, Kyle Cordes contributed three copies of his Abbreviator ST and DA Brumleve donated a copy of KidPublisher Professional. Clear Thinking offered EdHak, SKWare One gave away Seurat and Computer Works donated two arcade games. MP Graphics Systems supplied DynaCADD and AIM gave away two copies of the August issue and an ST and 8-bit Disk of the month. Current Notes donated a subscription to their fine magazine.

Vendors were happy with the show. ICD sold out of several product lines they brought. Clear Thinking did better at the MIST Show than at either single day at the Windsor show, according to Craig Harvey. Bob Brodie said his hand was still attached to his arm at the end of the day, so it was a

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good show! I asked him if he sold lots of product, and he laughed because he wasn't selling anything at his booth, just sharing good will! Bob Retelle said he "sold a lot of CompuServes." Talk about high finance! I wonder how H&R Block feels about that? (grin)

All the vendors I talked to expressed satisfaction with this seven-hour show. M-S Designs had some technical difficulties though. They were having trouble getting their "souped-up" ST enough power from the lines to work, but this was the only glitch spoken of at the show.

Impressions

As for Bill and I, we had fun talking to a lot of people from clubs participating in the magazine. We sold a bunch of disks and a whole pile of magazines.

There didn't seem to be a lot of 8-bit users in the crowd, but those who were there were very happy we now had an 8-bit Disk of the Month for them.

Officers of the three hosting clubs said later online that they're trying to get the St. Louis clubs involved in having a show next year. Let's wish them the best of luck, and with MIST's successful track record, it's sure to be a hit!

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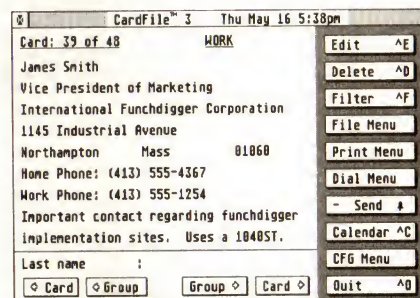
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So You Want to Start a User Group?

Part II

A Primer for Starting Your Own User Group

Tim Holt
Contributing Editor

Last time, we discussed how to go about seeing if you need a user group in your area. Hopefully, you decided to take the big plunge. You checked the BBSes, you asked your friends, you asked at the local computer dealer and you decided that a group is just what your area needs. Now we will look at how to obtain the most important thing any user group needs: *members*.

As soon as you decide to start a user group, there is something you must be warned about—you are going to have to dump some of your own money. How much you spend is up to you, but expect to spend at least \$25 to "get the word out."

In terms of getting the group off the ground, it is truly money well spent. Run off a few flyers with information about your group. This is very easy with any DTP program. It doesn't have to be great, just informative.

(Just a note: If you are starting an *Atari* group, make sure the *Atari* logo is displayed very prominently in your flyer. Same goes for *any* type of logo that is associated with your club.)

Your flyer should include, *at least*, meeting time—When you are meeting; meeting place—Where you are meeting; contact person—Someone folks can call for more information.

The flyer doesn't have to be a work of art, but it should catch the eye of anyone passing by... You have to let the world know that there is a new user group out there. Go to where the computer users are!

Post the meeting times and information about your group on every local BBS. It doesn't matter if the BBS supports your computer or not. Chances are someone on that BBS knows someone with your computer that doesn't have a modem, and will pass the word on. He or she will in turn pass it on and so on.

Ask permission to post a flyer in all

local computer stores. Everyone hates to ask strangers to do something, but I have found most store owners are willing to let you post info if you ask politely. Expect some anti-*Atari* sneers—it's part of the game.

Some might even let you put up a little bulletin board in a corner somewhere in the store, where club info can be posted. If a store owner does *not* let you place club info in his store, don't be offended. (Just remember him when the club really gets some membership going...he he he...)

Atari specific or authorized stores should even let you place some flyers on a counter or in a bookshelf somewhere, where prospective members can pick on up and take it home. Explain to the owner that your club can help him as much as he can help you. Chances are, you are already friends with the dealer.

Look for unusual places to post information. Are there bookstores that sell *Atari Explorer* or *Current Notes*, or *AIM*? Ask the manager if you can place a flyer by the magazine rack. Want to be real bold? Ask the manager if you can place flyers *in* each magazine! This is a great way to grab someone's attention. And do not limit it to *Atari* specific publications! Many *Atari* users pass up the *Atari* mags and head right for the *Computer Shopper*, etc.

Place a flyer in the local libraries. Most libraries have a "Community Calendar" type board. Place a flyer at the site where you are going to meet. Place a small classified ad in the Computer area of the classified ads in your local paper. Place an advertisement in the local community college or university paper. (This usually is real cheap advertising: 10 cents a word!) Post a flyer in the computer science or math department of your local college.

Let the local newspaper know about your group. Let the local radio stations

know. They usually have a community listing of groups. The radio stations *have* to list the groups as part of their FCC licencing agreements. Its called "Community service". Local TV stations often broadcast community meetings as well.

The point is, no one will post your information if they don't know you exist. Let everyone know. Some will help, some won't. I am sure that you can think of many more places to let the word be known about your club.

Okay, the big day arrives! Prospective members come to the meeting. Now what?? Well, the easy part is getting the members, the hard part is keeping them.

You and your officers must decide on what things you will *give* members. That's right: *give* the members. From my experience, after the folks plop down the membership dues, they expect a song and dance, with a little magic thrown in for good measure. A small percentage of the membership will help you out (take good care of those folks, they are few and far between). The rest want entertainment. It's up to you to do that. So, here is a little list of items designed to keep the natives happy. After all, you have their money... what are you going to do with it?

A Club Library

How much PD stuff do you have? Good, it now belongs to the club. Gather as much as you can, copy it onto disks, keep a list of what is on each disk. (The local dealer should have a nice selection. *Grab it!* Nicely of course.)

This is one of the most important parts of the club. People have come to *expect* a club library. There is a major need for a club librarian here. Remember, as leader, you need to spread the roles around.

Let me digress for a moment with a word of warning: *please* do not let your librarian make the club library his own private collection. The library belongs to the *club*. Buy the disks to copy, the labels, etc. Our club made the mistake of accepting the offer of someone to let his private PD collection be the club's library. When he got mad at someone else in the club, he decided to regress into childhood and took the *entire* library with him. We haven't seen hide nor hair of him for about 15 months.

Needless to say, we had to rebuild the library from scratch. Lots of hurt feelings, lots of bitterness because we let a private collection be the library. Be sure that you always distinguish what is the club's and what is

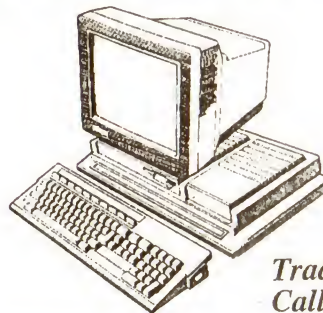


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not. The library can contain any public domain program, shareware, freeware or demo that is produced by a company. The library *cannot* contain any commercial programs, *even* if the company no longer supports your computer.

Discounts from Computer Stores

Local computer stores usually will offer user group discounts of anywhere from 10 to 25%. Don't press the issue if you don't get the discounts you want. Remember, dealers have a greater profit margin on software than on hardware, so you may not even get a hardware discount.

Let's say a member spends \$20 on membership and gets a 10% discount on software at Bob's Computer Stand. If the member plans to spend more than \$200 on software in during his membership period, he will recoup any money spent on the membership. Essentially, he gets his membership for free! This is an excellent selling point!

Discounts on Local Products/Services

If there is a member of your club that owns a business, ask if you can offer the club members a discount on his services. In the past, our club has offered discounts from plants to car tune-ups from various members in our club.

Discounts on Atari Publications

Current Notes, Atari Interface and ST Informer offer discounts to members of official Atari user group that are registered with them.

Giveaways

Door prizes are a great way of getting folks to show up. The prize can be *anything*, but traditionally, software is a good way to go. Ask your local dealer if you can get a program *at* his cost. Then you don't spend so much on door prizes. Members may even offer old programs that they no longer use, and are just collecting dust.

The giveaways don't even have to appear to be Atari-related. In the past, we have given away books on MIDI and recordings by groups that use the Atari, like Tangerine Dream or Fleetwood Mac.

You might make the giveaways even more spectacular at the holiday time. Of course, the type of giveaway is directly related to the financial situation of the club. (I told you that you might have to dump some money early.)

Auctions

Every six months or so, have a club auction, and let members sell the old unused items that are just collecting dust. Our local dealer, Jenkins' Computers, loves the idea. As soon as the auctions are over, everyone tramps over and buys things from them.

Here is how we do an auction: Members must bring original Atari-related products, and then we, the

club, auction them off. (We have had some hum-dingers of bargains too, like Timeworks DTP for \$15!!) The seller must pay the club 10% of the final selling price.

So, the seller gets 90% profit, the club gets 10% and the buyer gets a new toy. We have been very successful with these, and you should too. However, you had better advertise these as you did the original club meeting! Let everyone know you are having an auction about one month in advance.

A Club Newsletter

Decide who is going to do this! It requires a lot of time and patience, plus someone who is good at desktop publishing. Most members will *not* write for the newsletter, so many times it becomes a one man show. (Online magazines like ST-Report and Z*Net are great sources of information for newsletters when the membership has word processor fright.)

This job becomes as much a time sucker as being the librarian. The newsletter should be mailed out at regular intervals—once a month, every three months, whatever.

There are a number of questions that have to be answered. Who will pay for making copies? How big will the newsletter be? (Hint: One stamp pays for a nice 18 page newsletter: 9 pages front and back.) Who will make copies? What if you have 100 members and an 18 page newsletter? That's a lot of copier time, plus a lot of money!

Newsletters are great for letting members that missed the meetings know what is going on, for advertising upcoming events like auctions and for getting info out about new products. Members really like to get newsletters, even if they are not professional-looking. I looked at the first ACCEPT newsletter—two pages, and half of one was clip art. The rest was a message from our president who flipped out. (See previous column.)

Reminders

Have one member be responsible for sending a postcard to or calling the members to remind them about the upcoming meeting. This should be done the week prior to the meeting, so those that forgot about the meeting can adjust their schedule. This lets members also know that you are remembering them. A nice touch, no matter how large your group becomes.

Get Togethers

You do not always have to have a computer in front of you in order to meet with your group. Have semi-annual get togethers at local restaurants, have picnics during the summer and do other *non-computer* activities. Who knows, you may actually make a friend for life! I have!

This month we looked at things to "keep the customer satisfied." Next time, we will look at what should actually happen at the meetings!

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Sex, Lies and Graphics/Video

(but without any sex or many lies)

[Ed. Note: This article introduces our readers to Jay Craswell, president of Dover Research and designer of the ISAC and ALBERT color boards. In future issues of Atari Interface, Jay will be sharing his views on color displays and other topics that strike his fancy. We think you'll find Jay's unique outlook and sometimes off-beat sense of humor refreshing.]

Jay Craswell Contributing Editor

**Lucky thing we
had Tom
Hoyne!
His ability to
be talked into
foolish and
dangerous
situations
created a
lifelong bond.**

Ahh, another chance to write. When I think of the first thing I ever wrote for a magazine, I remember the astonishment of my dear Ma. Looking incredulous at the magazine (Atlantic Tech), she read aloud one sentence. "Did you really use this word?!" she demanded.

"Ah...yes," I replied. "Why, is it spelled wrong or something?"

"No." Ma said. "It's just that I didn't think you even knew that word!"

So now that you are forewarned of my limited talents in the world of writing.....

How it All Began

People are forever asking me where I got my "start" and I have had a tough time trying to explain it. Here for your amusement are some stories about my formative years as they concern electronics/computers.

One of my first experiences with computers was, of all places, English class featuring Mrs. Nelson. She was, to put it mildly, "quite a babe." Most of the male teenagers in her class were desperately in love with her. Personally, I was more interested in a flag twirler (I know, I still can't believe it) named Debbie who was about as far out of my league as you could get—blonde, beautiful, with one of those Farah Fawcett Hairstyles from Hell.

At any rate, thoughts and feelings about Mrs. Nelson teaching in the nude, etc., were pretty common to the male members of our class when our beloved teacher introduced us to poetry and computers all in the same day! Computers of this era were really primitive. When I say primitive, let your mind roam. Fred Flintstone-style 110 baud Teletypes were the order of the day.

Our project was to sit in front of the terminal and type in responses to the computer. With me was Rob (whom we called Flob), full-time funny man who stated in third grade that his ambition in life was to create his own religion with himself as the Great Abba Sid, Master of time space dimension and owner of several Mexican restaurants (just in case). All of this so that his "Followers" would pay his way by "donating" their worldly goods and facial hair. In return, he would promise nothing. This, he was sure, he could deliver and thus no one would be disappointed. Also guest starring in this little tale was a shy boy named Kevin who, to this day, will not speak to me.

Anyhow, we sat down and the computer chugging away somewhere in MECC-land (or maybe Bedrock) spit out the fateful questions....

"ENTER A SEASON OF THE YEAR <bing>"

After heated discussion between Rob and Kevin, they entered 'SPRINGTIME'. Then the computer made its fatal mistake. It asked...

"ENTER A HUMAN EMOTION <bing>"

Without hesitation (because it was prominent on my mind)—and besides, I didn't want to wait for Rob and Kevin to argue for another half hour—I typed 'LUST'. Truly a turning point in my life. "The Lust of Springtime" a poem by Rob, Jay and Kevin.

The problem was that the MECC computer did not have a very complete background on "lust," so it asked three boys who knew about as much as it did for details.

The results were, shall we say, "less than accurate." Especially since one-third of our group (Kevin) had absolutely no comment, wanted nothing to do with it, wanted new partners. The other two (Rob and myself), knew only what was available by word of mouth in the Tree Fort and from what we could guess based on African issues of National Geographic.

After reading our little masterpiece, Mrs. Nelson was so impressed (or so she said) that she asked—no, I guess you could say demanded—that it be read in front of the class. After carefully removing the divider separating the adjoining classroom (a larger audience to look stupid by), I stumbled to the front of the room and announced in a loud voice "The Lust of Springtime", a poem by Rob, Jay and Kevin."

Now, mentally picture the scene of poor Kevin smashing his head into his desk and covering his head with his arms groaning "Ohh, noo," followed closely by Rob turning beet red and stifling huge sobs of laughter.

Remember, also, that I am standing one foot on top of the other, white as a sheet (we are talking about a D average in speech), staring into the faces of two whole classrooms who are staring back at me with disbelief. No doubt the thought running through their minds

was "Is Mrs. Nelson really going to let him read this!?!?"

The actual text is lost in the depths of time, but I think this is close:

Springtime is the time for lust.

Fun and Games in Spring. (a computer translation I'm guessing)

It's the time, the time for lust.

Do it.

Do it.

Till we turn to dust.

Spectacular, eh? Rob tried so hard to stifle his laughter that he nearly gave himself a seizure. However, it was not a complete failure. Debbie the flag twirler did give me her phone number. Too bad I had no idea what to do with it!

I guess the moral of this story is that computers can help you meet chicks and is a good way to excuse bizarre behavior...a lesson I learned that the other computer "geeks" in school somehow missed. They were far too busy collecting confetti for the yearly locker clean out. Oh well, if I have a talent (and that is doubtful), it might be seeing things in a truly different light than others.

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By Randy Foster
President of SLICCWARE

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More Fun and Games!

At the risk of getting a letter bomb, here's another story of my formative years as it relates to the world of electronics and computers.

This story concerns my high school electronics teacher, Wilber Eggman (our nickname, goo goo ga joob). This was a man who had an instant dislike for me. Apparently, when my brother Denny took his 3-year class 11 years earlier, Denny managed to drop a 100 watt soldering iron onto this guy's lap.

You can imagine (or can you) a new level of dislike "vibes" coming out of this guy. I tried. I really tried, because I was interested in the subject...one full year of doing everything I could to make this guy like me. But he was cold. We are talking liquid nitrogen. Wilber, the super conductor of bad news.

We were a typical class. Sure, we had a classroom full of brains, plus a few dummies like me (I was pretty bad). I'm sure none of them had a clue as to why the teacher seemed to have it in for us. After all, he may have hated me personally, but he was democratic and took it out on us all!

Every single day started out about the same. We were told old WWII stories of how Wilber invaded France with his radar set (no doubt winning the war). We were then told that we needed to go back to the

"basics." That meant we would do the most boring and mundane garbage possible.

Then, he would tell us (I'm not kidding) that we were the worst class since he started teaching (Pre-Cambrian period?) and that he hoped enough of us would drop out or fail so he could spend more time stroking his "dream class." This usually took half of the hour.

This guy was a breakthrough in the definition of the word jerk. He did things that blow my mind to this day. He would tell us that he didn't "trust" us with his beloved solid state components. He figured we were so dumb we would blow them all up. So, he gave us the course he wrote up in the 40's and 50's for vacuum tubes. Ask me about 6V6Gs some day. No, on second thought, don't!

Since he had to drag out a tube tester and some *really* old parts, we got a glimpse of his "Goodie Room." Here I was to discover one thing that would really change my life—the relics of the old Richfield HAM Radio station. I thought this was the neatest thing since sliced bread. With this thing (or something similar) you could talk to people all over the earth... and, nowadays, even people in space! Wilber's comment that HAM radio was silly and a waste of valuable time was only more incentive for me to take and pass my HAM test. [If you are a HAM and ever hear me or my wife give us a call! Our radio call signs are WB0VNE and N0KJH (which I contend stands for K.eep J.ay H.appy).]

Anyhow, since Wilber would not let us turn on the set or play with his beloved solid state junk (transistors), we waited until the end of one class and took all of his tubes and plugged them into his tube tester...all at the same time.

You can't imagine what happens when you do this. We are talking about a 2000 watt psychedelic light show. This went over real well with him. We got a full year's worth of lectures in the danger of fire and, to top it off, we all got *The Killer Question!*

Now, this was a loooooong time ago, so I don't actually remember what the question was, but it was tough! *It Was Impossible!?* It was so hard that he gave us all 24 hours to figure out the answer any way we could. He told us that it was going to count for some incredibly large percentage of our grade. If we failed to answer it correctly, we would fail the course. Wilber figured that this would get rid of enough of us that there wouldn't need to be a class next year. Or so he said.

Enter Dave Senum, always good for a yuck and besides, he had a real CB radio, which was pretty cool in those days. I had some rough idea that this was almost as fun as a HAM radio and was forever asking him questions about it. (Note: CB radio doesn't even come close.) Back to the story...

Dave wasn't going to miss out on his third-year Electronics course and end up taking Woodshop. Besides, Wilber was a vegged out old fart/complete jerk

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and didn't change his cloths very often. Yes fans, this called for drastic action!

We went to the nearest pay phone during lunch, where Dave directed me to call the local library (I had the dime or was it a nickel?). Dave instructed me to inform whomever answered that I was calling for "Professor Senum" and needed to reserve a room for that night. His plan was that few (or none) of us would solve the problem alone, so we'd have solve it together. If even a few of us answered incorrectly, the class would be gone. We needed a place to study that had lots of reference material.

OK, I admit I was really scared. I was sure the library police were going to arrest me. After all, didn't I have overdue book fines that were higher than the national debt?

I dialed (scared out of my mind). The nice lady at the library said in a sweet voice "I'm very sorry, sir, but this is very short notice."

Well, that was OK with me. I just wanted to get away without getting caught. I mumbled "Oh, short notice...ahh...OK."

Dave, no doubt sensing that I was about to wimp out, ripped the phone out of my hand. Holding it in both hands as if he was going to head butt it, he screamed "This is *Professor Senum!* Listen Goddamit, I haven't been teaching for as long as I have (yeah, right) to listen to a bimbo like *you* tell me I can't have a room for my class when I need it!...Don't tell me *your* problems just do it!!! I'm going to be there at 6 PM. Have it ready."

He slammed down the phone, sat on the floor and turned white. I said "I can't believe you just said that." He said "I can't believe I just said that."

We did get the room. "Professor" Senum was afraid to show up early lest the library lady meet him and realize he was a tad young for his title. When I got there, the old bat insisted that a person at least 18 years old sign for the room.

Lucky thing we had Tom Hoyne! He had just turned 18, and we dragged him to the desk and got him to scribble his name. His ability to be talked into foolish and dangerous situations created a lifelong bond. Besides, you wouldn't believe how funny he looks when you talk him into stuff like that.

We had the entire class together and took parts of the problem apart. Somehow, we got the correct answer. We also drew some crude pictures for the librarian on her overhead. The next day, Wilber was totally stumped as to how all of the class got the correct answer, and we continued on for the full three years.

I learned some valuable things. First, that the rule makers *can* be stopped from making your life suck (sometimes), if you are clever, sneaky and willing to bend a rule or two. Second, that working together can (sometimes) be better than hoofing it alone. And last, when you need someone to do something foolish or dangerous, Tom Hoyne is your man!

Looking back though, I have to wonder how things would have been if we had all just taken wood shop.

Later, Jay builds an Orgasmatron?!!

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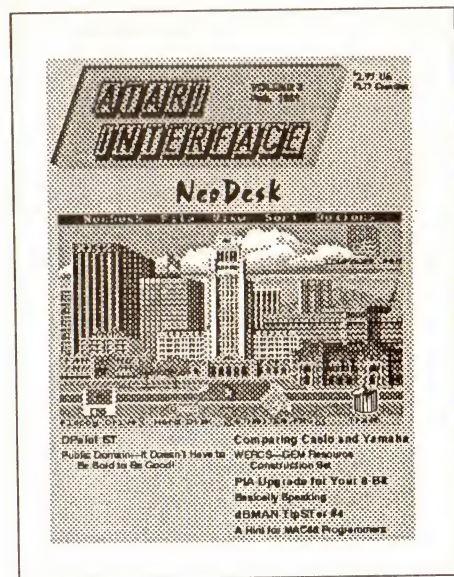
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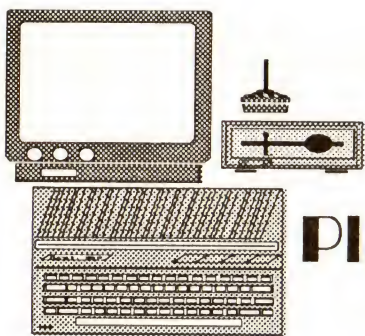
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8-Bit Atari Player Missile Graphics

**Mitchell &
Malcolm Orr
AAAUA**

The classic Atari 8-bit computer is the most versatile of the machines which used the 6502 Central Processing Unit (CPU). With the additional chips ANTIC, PIA, POKEY and CTIA (GTIA on later machines)—the latter of which provided Player Missile (Sprite) Graphics—the Atari 8-bit was the most powerful of the 6502 class computers. This was clearly demonstrated by the Atari "Star Raiders" game which led the field in 1979.

Other features, which we now take for granted but which appeared early in the development of the Atari, were colors, full screen editing, upper and lower case letters and overall the best ever graphics in an 8-bit computer. In this article we have attempted to provide an introduction to PM (player missile) Graphics, together with memory locations you will need in order to explore this powerful tool of the Atari 8-bit computer.

How It Started

Our initial interest was to use this computer to develop a visual two-dimensional display to show the mechanism of complement activation in the human body, how it occurs and what the consequences are when this system is activated inappropriately.

Under such circumstances there is a danger of "friendly fire" and bystander lysis if the defense mechanisms are turned against the cells of the host, rather than against the invading micro-organism.

Just as the computer provided an excellent forum for Star Raiders, so, too, did it lend itself to a dynamic presentation of the "Battle Within."

To illustrate this reaction, we first had made molecular models, but these did not move. The computer provided the dynamic interaction to show the ongoing process. In 1982, it was not poss-

ible to make these models on the main-frame computers available to us at that time.

In June, 1982, we purchased an Atari 800 Computer with 48K memory, an 810 disk drive, an 850 serial/parallel interface and a Hayes 300 baud modem at a cost of about \$2600. All are still operational today. Our guide was "Your Atari Computer" by Lon Poole, et al. We also found several excellent articles in *Compute!* magazine.

It took us less than three months working parttime to finish a program which later won two awards. We used a programming technique known as "Substitution." We reviewed existing graphics programs and modified the shape tables and the colors and paths of the players. Any changes were checked instantly, as they were part of a running program.

We were creative as we were learning from the masters.

What are Player Missile Graphics?

Player Missile Graphics are special graphics characters which can be placed over (visible) or under (invisible) the screen and are independent of the screen background. They are zero to eight pixels wide, and up to 256 pixels high. In quadruple width, each player can be up to 32 pixels wide.

If all four Missiles are programmed side by side, they can be used as a fifth player. In quadruple wide mode, the five players can cover the entire screen. They are so independent that they do not appear if you perform a screen dump with player-missiles on the screen.

Priorities can be established between the players and the screen so that the players can move in front of or behind images on the screen. Thus, you may have a plane fly behind a church steeple

in your picture, but remain in full view in front of the sky and the hills in the background.

Players may be positioned anywhere on screen or just off screen waiting to appear, like actors waiting in the wings of the theater, ready to walk onto the stage.

In normal mode, each programmable pixel in the player missiles is identical with a pixel of Graphics mode 7. When you use half height players, you match Graphics 7.5. Remember that Graphics 7.5 is available from Basic XL and XE (OSS). But, if your favorite screens are in one of the more exotic GTIA modes, there is no reason that you cannot use these modes to showcase your masterpiece in Player Missiles.

But long, tall columns prancing across the screen would be very boring, especially if you wanted to show Great Balls of Fire exploding at random. This is where your creativity comes in. When you create your animated masterwork, you must design your players, just as the animators at Walt Disney Studios create their characters.

What we are doing is storing in memory small sequences of code which tell the computer which pixels in the display to illuminate. The data for each player is stored in a special, programmer-defined memory location. The players allow you to create animation by "player flipping" between different bit maps stored in memory.

Each row of the player is defined in memory by a single byte. If your player is 24 pixels high, that shape is defined by 24 bytes. If you create a table of different shapes in memory, you can animate at machine language speed simply by pointing to another memory location in memory. This is accomplished with a routine written by Sak & Meier which is neatly stored on Page Six of memory.

You may flip between the images stored safely above MEMTOP, (the top of memory available to Basic). The engineers who conceived the Atari gave us a hardware register for the X-coordinate for each of the players but they did not provide a simple means of changing the Y-coordinate. Moving the row of the player in Basic is slow and cumbersome.

Sak & Meier have made this a painless process in their vertical blank interrupt routine. This simple machine language subroutine is less than 250 bytes long, and fits comfortably on Page Six of the computer's memory. The writers of the Atari operating system gave us Page Six of memory (\$0600-\$06FF, 1536-1791) to insert a machine language subroutine which allows you to change the position of the X,Y coordinates of each of the players as often as fifty times per second. That is fast enough for movie quality animation.

The television screen is scanned with an electron beam from the top left-hand corner, across the screen to the right when it shuts off and moves back to the left of the screen to repeat the process.

The interval when the beam is turned off is very short and is known as the horizontal blank interrupt.

When the electron beam reaches the bottom right

corner of the screen, it shuts off, and returns to the top left corner. This interval is known as the vertical blank interrupt. Sak & Meier use this interval to have the computer look at the next position for the players. In the case of Player Zero, The X coordinate will be stored in memory location 53248 (HPOSP0) and the Y coordinate will be stored in 1780 (VPOSP0).

Now, you won't find VPOSP0 mentioned in the books. It was created by Sak & Meier for these very fine programs. In the time it takes for the electron beam to move from the lower right corner to the top left corner, the Atari is capable of performing approximately 7980 machine cycles. Moving the images of the players for us is just one of the tasks the computer accomplishes during this vertical blank interrupt. Don't underestimate the power of these short routines. They can unlock the flexibility of Player Missiles for you, as they did for us. Please review the description of these routines. The papers of Sak & Meier are a goldmine of information for those who wish to program in Basic. Their papers review many aspects of 8-bit Atari programming. Their programs include:

- A machine language subroutine for Page Six (\$600 to \$6FF)
- Vertical Blank Interrupts
- Antic direct memory access (DMA)
- Definition of the top of Memory (MemTop)
- How to select colors for the players
- How to set the players' X and Y positions
- How to change the pixel resolution of your players
- How to set screen priorities for players
- How to tell Antic of Vblank PM and the address of the first page of data shape tables

To demonstrate how powerful these programs are, the code to actually move the players around the screen is only a couple of lines long. These are lines 170 and 180 in the February '82 paper. Changing just these two lines will alter the pathway that the players follow. In the August '82 paper, movement is defined in lines 125, 135, 145, 165, 185, 195 and 205. Note that line 205 slows the action down, so the cowboys walk with a saunter.

Memory Locations

When you program the Atari computer, the computer language uses verbs in the form of special memory locations which, when conjugated with the appropriate numbers, execute the programs of the operating system.

There are some essential memory locations for implementation of Player Missile Graphics. You may check what number is set at a given memory location by PEEKing. You may change the number with the Basic POKE command.

Once you have decided how you wish your players to appear, you may POKE all of these values into the appropriate memory locations with a single line of Basic code. Some you may want to change during

your program. Just as one actor may play more than one part, your players may represent more than one object. Just POKE in the new code from the selection below.

- 559 DMA control register (SDMCTL)**
 See full explanation in CHADWICK.
 34=Default value, ANTIC active, screen on
 0=Shuts down Antic. Processing time increased 30%
 46=produces double line resolution, same size pixel as Graphics 7
 62=produces single line resolution, same size pixel as Graphics 7.5 (ANTIC Mode E)

Summary of 559 bit codes.

Option	Dec	Bit
No Playfield	0	0
Narrow Playfield	1	0
Standard Playfield	2	0,1
Wide Playfield	3	0,1
Enable Missile DMA	4	2
Enable Player DMA	8	3
Enable Player and Missile DMA	12	2,3
One line player resolution	16	4
Enable instruction for DMA	32	5

- 623 Player/Playfield Priorities** (only 1 pixel on)
 1=All players have priority over playfield
 2=Player 0 & 1 have priority over playfield and players 2 & 3
 4=Playfield priority over players
 8=Playfield priority for registers 0 & 1 over all players and priority over playfield registers 2 & 3

- 704-707 PM Color registers (COLPM0-COLPM3)**
 Stored value determines the color of the player and its missile.

- 1771 Player Missile address** (Special PMvblank code, accessible with Sak & Meier program only)

- 1772 Player Drawing** (Special PMvblank code)

- 1780-1783 VPOSP0-VPOSP3** (Only for Sak-Meier Programs)

- 1788 Player Missile Address + 4**

- 53248-53251 Player horizontal Position Registers (HPOSP0-HPOSP3)**
 Stored number gives horizontal position.
 0=Off screen left
 255=Off screen right
 Note: Pos 49 - 207 appear on the TV screen

- 53252-53255 Missile Horizontal Position (HPOSM0-HPOSM3)**
 Stored number gives horizontal position.
 0=Off screen left
 255=Off screen right
 Note: Pos 49 - 207 appear on the TV screen

- 53256-53259 Player width registers (SIZEP0-SIZEP3)**
 0 or 2=normal width
 1=twice normal width
 3=quadruple normal width

- 53260 Missile Width register (SIZEM)**
 same code as for Players

- 53277 Graphics Control Register (GRCTL)**
 Controls Player Missiles with 559 (DMACTL)
 2=Player DMA only
 1=Missile DMA only
 3=Players and missiles activated
 Note: Poke with 0 (zero) to turn off P/M

- 54279-54280 Player missile base register (PMBASE)**
 Contains the starting address of the player missile shape tables

Images on the television screen are created from the top down, where 0,0 is in the top left-hand corner. This is also true for the players, and the index point for the players is in the top left-hand corner.

Binary notation is used to identify which pixels are illuminated and which are not. It is a little confusing that binary code reads from the right, which will be eight columns to the right of the index point for the player. A blank line would be represented by zero. All pixels illuminated in one row would require 255 to be entered. To illuminate only the leftmost pixel on a single line of the player, you insert the code 128.

To define any combination of illumination and blanks, you must insert the number between zero and 255 which matches the pattern you desire to illuminate on the screen for that row of the player.

Very few of us are so facile with binary code that the appropriate number flashes to mind immediately. The lesser mortals among us have two solutions to this problem of identifying the digital code for each line of the player. One is to draw our designs on graph paper, and then calculate by hand the binary code sequence for each row of the player.

For those who seek a computer solution to this problem, there are player missile generators which can be used to create your masterpiece and automatically translate your graphic image to the necessary digital code for insertion into the program.

One such program is PM Design Aid by Tom Gurak. It is in our AAAUA library. If memory serves me, the program appeared in Creative Computing in 1981 or 82, and was reprinted in Creative Atari, edited by David and Sandy Small and George Blank. It will allow you to design your drawings and digitize them for insertion in your Basic program.

If you are learning to program in Basic, the structure of the players and the concepts you need to program them will reward you as you expand into other areas of programming.

Suggested Reading

- Chris Crawford. Player Missile Graphics. Compute! #8, January, 3, 66, 1981.
 Ian Chadwick. Mapping the Atari. Compute! Books 1983. ISBN 0-942386-09-4.
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 Tom Gurak. PM Design Aid. Creative Atari. David Small, Sandy Small & George Blank. Creative Computing Press, 64-66, 1983. ISBN 0-916688-34-8.
 Lon Poole, Martin McNiff and Steven Cook. Your Atari Computer. Osborn/McGraw Hill, 1982.
 Philip C. Seyer. Atari Player Missile Graphics in Basic. ISBN 0-8359-0112-2. Reston Publishing Co. Inc. 1984.
 Tom Sak and Sid Meier. P/M Graphics Made Easy. Compute! #21, February, 90-93, 1982.
 Tom Sak and Sid Meier. Animation And P/M Graphics. Compute! #27, August 119-124, 1982.
 Eric Stoltman. Extending Player Missile Graphics. Compute! #17, 3, 98 1981

All programs described in this article are available on disk in the AAAUA Library. AAAUA non-members are asked for a \$5 donation. Send your re-



quest with check to AAAUA, P.O. Box 79-1426, San Antonio TX 78279-1426.

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About the Authors

Dr. Orr received his MD degree at the University of Queensland, Australia and his PhD at the Australian National University at Canberra. He is currently a Professor of Anesthesiology at the Medical Center Hospital in San Antonio, Texas. He began computing with an Atari 800 in 1982. His medical programs won several scientific awards later that year. Although Dr. Orr has since acquired an Atari ST and a Macintosh, he still uses his now several 8-bit Ataris for record keeping, to produce a widely distributed newsletter, and for just plain fun. Dr. Orr has been a member of AAAUA for over eight years.

Mitchell Orr, Dr. Orr's son, has lived in the United States for the past twenty-two years and assisted greatly in the development and debugging of the award winning programs. At that time he was a high school student. He now is a graduate of Our Lady of the Lake College in San Antonio with a BA in Political Science and will soon be continuing his studies towards a Masters in Information Science at North Texas University at Denton, Texas.

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This device brings the power and flexibility of larger systems to your 8-bit. The **Multiplexer** is a device (actually a collection of modules) that allow up to 8 Atari's to read and write to the same drive (typically a hard disk), printer, and talk to each other. One "master" computer (any 8-bit) is equipped with the master **Multiplexer** interface (then up to 8 "slave" computers can hook up to the master, each having their own slave interface). The "common" peripherals (things that are to be shared) are connected to the master computer. On each slave, all disk and printer I/O is routed through the master, so no drives are needed on them. The master computer can be configured in any manner you wish - you can for example have certain peripherals "local" to the slave, or routed to a different number on the master. Under development is a BBS system that will make full use of this device, along ing up to 8 lines/users to be using the system at the same time! A multiuser chat mode is a feature of this program, however, you do not NEED this program to run a BBS with the **Multiplexer** (but be warned that not all BBS programs will run concurrently). All slaves are independent, and do not need to have the same program running on them. This system is excellent for BBS SysOps, because you can be using your hard disk(s) while still running your BBS uninterrupted! Another example is in a classroom situation, or anywhere a disk needs to be shared by different people. This is an EXCELLENT programming/debugging tool as well! The **Multiplexer** price is \$199.95 for a master and two slave units (plus \$5 S/H/I). Additional slave units are \$99.95 each.

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The zzSoft Assembly Programming Package

The Package Beginners Have Been Waiting For

Robert C. Arp, Jr.

Had circumstances permitted, "Introducing Atari ST Machine Code" with companion disk is the package I would have published two years ago.

Well, my text would have been longer—perhaps wordier—but with more operating system detail; and the examples would have been different; and I would have supported another editor, assembler and debugger.

But the essence of the package from England that I'm to discuss and that which I would have introduced myself are similar enough that I can recommend this package as enthusiastically as I would have recommended my own.

"Introducing ATARI ST Machine Code" was written by Roger Pearson and Sean Hodgson, published by zzSoft, 3 Riverdale House, Mytholm Close, Hebden Bridge, West Yorkshire, England, HX7 6BP, in December, 1990.

If you would like to purchase the book and disk (I paid \$24.95), please contact Best Electronics, 2021 The Alameda, Suite 290, San Jose, Ca 95126-1127 (408)243-6950. In fact, were it not for the efforts of Best Electronics, I would not have the materials which permit me to write this article.

A True Beginner's Package

zzSoft has put together a true beginner's assembly language package for the Atari ST. The disk contains an editor, not the best, but definitely not the worst; an assembler, not the best, but certainly not the worst; a symbolic debugger,

again, not the best, but definitely not the worst; a resource construction set that is adequate; and many examples and listings.

The 24 chapters cover disk formatting, pull down menu construction, GEM objects, desk accessories, GDOS, blitting, AES, VDI, BIOS calls, XBIOS calls and GEMDOS calls. Chapter 23 discusses the text editor; chapter 24 discusses the assembler and debugger. Interfacing assembly with GFA BASIC is covered in chapter 18. Other specific topics are resource construction, file selectors and bit images.

The book contains a table of contents, an index, a key code appendix, bibliography and glossary. Text files on the disk cover the resource construction set in more detail, explain all 68000 instructions and all operating system calls. Many of the files are arced, but the disk even includes copies of ARC-SH191.PRG and ARC.TTP. The only thing missing is a list of debugger commands. Those commands are available via the Help key when working within the debugger, but I'll be giving you a list of the more important ones.

Evaluating the Package

A programming package of such scope would require months of evaluation if I could not find something to ram down its throat rather quickly. My primary objective was to get an immediate response to AIM readers with the confidence to recommend "yeah" or "nay" unabashedly. For my torture test, I chose a program that would send DevPac to the showers immediately.

The program, SECTDUMP.S,

reads a designated logical sector of a designated partition, formats the sector data and writes the formatted output to a designated file.

I quickly learned two very important facts about the zzSoft assembler. One, put everything in the root directory, otherwise the assembler will cough up executable files with strange names in strange places. Two, the assembler outputs a couple of meaningless warnings even when assembly and linking have been successful.

That's ok, I can live with that, and so can you. The assembled executable program ran perfectly. The assembler was unreasonably slow, and when errors were actually present, the messages were a bit cryptic. I could decipher their meaning, but you may have a bit more trouble with the error messages.

Not to worry, I can give you a few pointers. Don't use .s on branch instructions and don't use (pc) with labels. Use a RAMdisk because everything is very disk intensive. I did not check out the RAMdisk included on the companion disk because whether it functions correctly or not is irrelevant—there are plenty of other RAMdisks around.

The assembler, debugger and assembled program are accessible from within the editor. The files you need in the root directory of the disk from which you are working are Assemblr.TTP, Editor.PRG, Editor.RSC, Link.TTP, Debug.TTP and the source and/or program with which you are working.

The Debugger

Within the debugger, the prompt is >. Debugger commands

are mostly two characters long. If you single step a program within the debugger, you will not see the first instruction line before it is executed. Instead, the first instruction will be implemented, then the second instruction will be shown. Thereafter, as you single step each instruction, the next will be shown.

Here is a list of the more important debugger commands. You can view the rest using the Help key from within the debugger.

```

$ Commands
$c or $C  stack backtrace
$r        show registers
$p        show basepage
$o,$x,$d  set number base
$q        quit returns you to editor
$b        show breakpoints
$s        set symbol offset
$e        show external symbols

```

```

: Commands
:c or :C  execute or continue
:s or :S  single step
:b        set breakpoint
:d        delete breakpoint

```

The Resource Construction Set

I didn't spend much time with this program. Everything seemed to function correctly. I tried to read in a resource file constructed with Atari's developer resource construction set and could not; however, I was able to read in DEGELITE.RSC and observe the menu and dialog boxes. I must leave some of the fun of exploration to you.

Conclusion

The zzSoft assembly package contains enough material to keep one busy for a very long time. For very little expense, the entire assembly language programming environment can be explored. In fact, for the casual programmer, or for one who uses a higher language primarily, this package might be sufficient for all assembly language programming needs.

Robert C. Arp, Jr.
 278-1 San Tomas Aquino Rd.
 Campbell, CA 95008
 408 (370-9039)

```

;Program Name: SECTDUMP.S
;Version: 1.001
;Function:
; Reads a designated logical sector of a
; designated partition, formats same and writes
; the formatted output to a designated file.
; So that this example be as uncluttered as
; possible, the sector to be read, the partition
; from which it is to be read and the output file ;
; path are all coded as constants within the
; program.
; The associated output buffer is also coded as ;
; a constant.
; A version of this program with a user-
; friendly interface would include a GEM window,
; menus and dialog boxes so that all of these
; constants could be chosen.
; In addition, the file selector would be
; available for the output file path to be chosen.

```

```

calculate_program_size:
lea      -$102(pc), a1      ;Fetch basepage
; start address
lea      output_buffer, a7  ;Fetch prg end addr.
; Output buffer size is 2,516 bytes for each
; sector to be read.
adda.l   #2516,a7          ; Output buffer space
adda.l   #1200,a7          ; Space for stack
movea.l  a7, a0            ; A7=>new end of prg.
suba.l   a1, a0            ; Program size
return_memory:
pea      (a0)              ; Push program length
pea      (a1)              ; Push basepage addr.
move.l   #$4A0000, -(sp)   ; m_shrink=GEMDOS $4A
trap     #1                ; Invoke exception
lea      $(a7), sp        ; Reset stack pointer
create_output_file:
move.w   #0, -(sp)        ; File = read/write
pea      output_path      ; Must be specified in
; data section
move.w   #$3C, -(sp)      ; f_create=GEMDOS $3C.
trap     #1                ; File handle is
; returned in D0
addq.l   #8, sp
move.w   d0, output_handle
read_and_write_sectors:
move.l   #0, byte_count   ; Init. byte counter
lea      output_buffer, a5 ; Get output address
move.w   #0, sector       ; Sector to read and
bsr      read_sector      ; store in buffer
bsr      write_sector
write_output_file:
pea      output_buffer

```

```

move.l   byte_count, -(sp) ; # of bytes to write
move.w   output_handle, -(sp)
move.w   #$40, -(sp)      ; GEMDOS function fwrite
trap     #1
lea      $(sp), sp        ; Reposition stack pointer
close_output_file:
move.w   output_handle, -(sp)
move.w   #$3E, -(sp)      ; GEMDOS $3E = f_close
trap     #1
addq.l   #4, sp
terminate:
move.w   #0, -(sp)
trap     #1
print_line:
move.l   a0, -(sp)        ; Push string onto stack
move.w   #9, -(sp)        ; Function = c_conws
trap     #1
addq.l   #6, sp
rts
newlines:                  ; Write 2 newlines
move.b   #$D, (a5)+
move.b   #$A, (a5)+
move.b   #$D, (a5)+
move.b   #$A, (a5)+
add.l    #4, byte_count    ; Add count to output
rts      ; file byte counter
read_sector:
move.w   #7, -(sp)        ; Drive H
move.w   sector, -(sp)    ; Start sector
move.w   #1, -(sp)        ; Read 1 sector
pea      input_buffer     ; Store sector here
move.w   #2, -(sp)        ; read (ignore media
move.w   #4, -(sp)        ; changes)
trap     #13              ; rwabs function
add.l    #14, sp
rts
write_sector:
lea      input_buffer, a3
moveq    #31, d6          ; Row down counter
moveq    #0, d5           ; By bytes up row counter
write_headings:
lea      heading_2, a0    ; Top of page heading.
move.w   #4, d0
write_heading_2:
move.b   (a0)+, (a5)+
dbra     d0, write_heading_2
write_sector_number:
move.w   sector, d1
bsr      function_2
lea      dec_string, a0
moveq    #1, d0
write_digit:
move.b   (a0)+, (a5)+

```


Prism

Bill Rayl

One the brightest new stars in the Atari heavens is Lexicor Software. A lot of people, including myself, have waited for months to get their hands on the packages Lexicor announced back in January of this year.

Well, the packages are shipping, and the wait has definitely been worth it! I have had the pleasure of using both Prism-Paint and Chronos-3D for about a month or so now, and I'm both pleased and impressed. In fact, I was so impressed with the software that I signed up to help Lexicor with their online support on CompuServe.

Although I am now doing support for Lexicor, I am not an employee of Lexicor. I have not been paid by Lexicor or anyone at Lexicor, and I am using my own personal CompuServe account for the online work. I mention my affiliation with Lexicor because it's the honest thing to do. My first responsibility as a reviewer is to give you as honest and thorough a product review as I can, and that is what I intend to do.

Now that the "disclaimer" is out of the way, let's get to the review! We'll look at Chronos-3D next month. This issue, I'm going to focus on Prism Paint.

What is Prism Paint?

Prism Paint is the first truly resolution independent paint programs available on the Atari ST/TT computers. While I've only used Prism Paint in all ST and TT modes, the program is designed to work with all color boards that use a GEM driver. So, if you have an ISAC or ALBERT board from Dover Research or CyberCube's new CyReL SUNRISE board, Prism Paint will take advantage of the new resolutions/colors available.

Complementing its paint program features, Prism Paint can also be used to create or modify FLM animations (created by Prism Paint or Chronos-3D) or DLT animations (created by Antic's Cyber Studio and Cyber Paint).

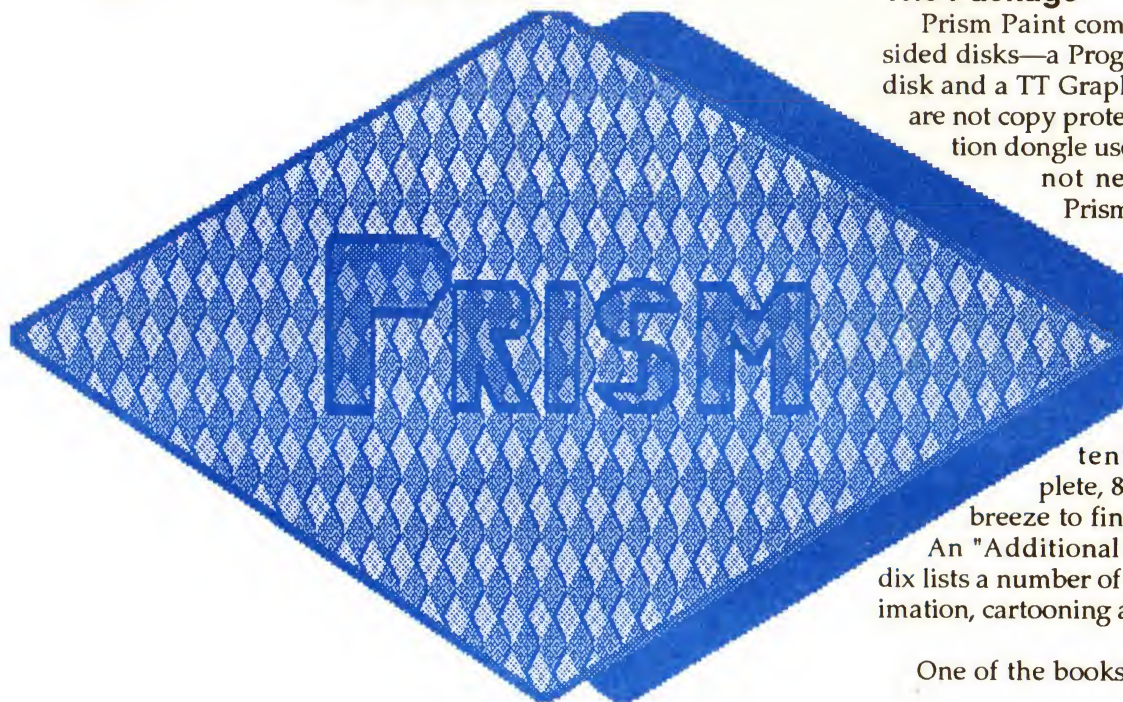
The Package

Prism Paint comes on three double-sided disks—a Program disk, a Utilities disk and a TT Graphics Disk. The disks are not copy protected and the protection dongle used by Chronos-3D is not necessary for use of Prism Paint.

The manual, which comes in a sturdy 3-ring binder, is well-designed and well-written. A six-page Table of Contents and very complete, 8-page Index make it breeze to find almost any topic.

An "Additional Resources" appendix lists a number of useful books on animation, cartooning and drawing.

One of the books on the list—Build-



Paint

ing Beings, Creating Creatures, and Doing Dinosaurs—was written by Lexicor's Lee Seiler.

Topics covered in individual chapters of the manual include Screen Layout, User Interface, Drawing Tools, Color, Fills and Brushes and Animation. A Reference chapter gives short descriptions for all drop down menus, etc.

Throughout the manual, simple step-by-step "tutorials" show you how to use each feature of Prism Paint. Two full-blown tutorials take you through the process of creating a picture and editing an animation.

General Info

The default main menu window displays all the tools available in Prism Paint, as well as the current Brush, Line, Fill and Text settings. Notice that this menu is called a "window." That's exactly what it is...a GEM window. It can be moved around the screen, so you can actually view your picture or frame while the menu is displayed.

By clicking on the "select active window button" at the top right corner of the main menu window, you can switch to only displaying the Drawing Tools, Frame Control (animation) or Color Palette menus.

These menus are actually parts of the large main menu. The Frame Control menu is particularly useful for paging through an animation frame by frame while viewing each frame.

The main menu, itself, can be displayed either full- or half-size. Pressing the right

mouse button toggles between the menu windows and the "Work screen," just like in DEGAS and other paint packages.

Tools

Prism Paint can do all the things you normally expect a paint program to do. You have tools for drawing lines, K-lines, boxes, circles, etc., with or without being filled. Other "standard" drawing tools include Spray, Text and Rays.

One unusual drawing tool is the Spline tool. With this, you can draw using Linear (Straight), B-Spline (Bezier) or C-Spline (Cardinal) curves. The ability to create Bezier curves is a big plus, allowing you to create very smooth curves and arcs automatically.

Other drawing tools include Copy and Paste, a Magnify mode and dialogs for setting Write Modes (Replace vs. Transparent), Spray Control, Spline Control (for choosing one of the types listed above) and Set Snap Grid.

The Set Snap Grid dialog lets you set a grid size, from two to 16 pixels in in-

The software performs flawlessly in every resolution on every machine I've tested it on—from a 520ST with TOS 1.0 to a TT with TOS 3.05.





crements of two pixels. Spray Control lets you change the size of the "spray gun" nozzle, as well as the Flow (amount) and Speed of the "paint" being sprayed.

In Magnify mode, you can magnify an area anywhere from four to 23 times. The left-hand side of the Magnification screen gives you access to the color palette, as well as a full-scale view area. Clicking in this view area takes you to another area of the picture. Magnify mode's Color Picker is a handy option that allows you to select an on-screen color quickly.

Color Palette

Prism Paint's color palette is organized into color "pages." Each page can contain up to 32 colors. On a standard ST with no color board, you only get one color page. In TT low resolution, the color palette consist of eight 32-color pages. You can scroll through the color pages by clicking on the arrows contained in the color palette display.

One of the nicest features in 256-color TT mode is the Color Finder. You can use this feature to display all 4,096 colors available on the TT, 256 colors at a time. You can even quickly replace the entire color palette with a 256-color page from the Color Finder.

On all machines, you can Load and Save color palettes and change the RGB values for a given color in the palette.

Fill Patterns

The fill pattern options available in Prism Paint are wonderful. You have the choice between monochrome or color fill patterns. On a color monitor, the mono-

chrome fill patterns can use any one color from the palette. For color fills, you can use all the colors available in your palette.

You can have up to 36 different mono and 36 different color fill patterns available at one time. Prism Paint allows you to save these palettes individually for maximum flexibility.

You can, for example, use Prism Paint's fill pattern capabilities to create "dithered colors," thereby extending the number of "viewable" on-screen colors. Although the dithered colors are not "true" colors, they sure make a difference, especially in ST medium resolution. This dithering of colors is sort of like mixing paint on a "real" palette...equal parts of red and yellow make a very nice orange, for instance.

One of the most impressive features here is the ability to "grab" a fill pattern from a specified area of the Work screen. I recently used this feature on a snapshot of the Hotwire menu. I "grabbed" the little Code-Head icon (the "info" icon) and used it as a fill pattern. Kinda neat.

Brushes

Up to 16 brushes can be available at one time in Prism Paint. As with fill patterns, you can edit/create your own brushes and save them to disk. You can grab an area of the work screen and use it for a brush, just like you can with fill patterns, as well.

Along with editing of the brush itself, you can also edit the brush outline. This allows you to create cross-hair outlines, etc.

Animations

A review of Prism Paint wouldn't be complete without a look at this software's animation capabilities. Prism Paint allows you to add background images or color changes, etc. to animations created with Lexicor's Chronos-3D or Antic's Cyber Paint/CAD-3D software.

Or, you can create your own .FLM or .DLT animations from scratch directly from within Prism Paint!

Animation in Prism Paint is handled on a frame-by-frame basis. Options for Clearing, Inserting, Deleting and Animating frames are all contained in the center of the main menu or accessible on the small Frame Control menu.

Whenever you insert a frame, Prism Paint automatically makes a copy of the current frame and inserts it—along with everything in that frame—after the current frame. This makes it very easy to modify the frames to create animations fairly quickly.

To move from frame to frame, you can either click on the scroll arrows at the bottom of the menu or simply use the left or right arrow keys. To actually animate your frames, Prism Paint has a built-in player that allows you to choose the number of frames per second. You can also set Loop or Ping-Pong mode. In Loop mode, all frames are animated and then the player jumps back to the first frame to start the sequence again. In Ping-Pong mode, when the animation gets to the last frame, it then works its way backward frame-by-frame to the first frame and then starts over.

You can even play animations from disk without loading them into Prism Paint, via the Play Animation option in the File drop-down menu.

Miscellaneous Features

Prism Paint can load the following graphic file formats: Prism Paint (PNT), Degas (PI?), Degas Elite (PC?), NeoChrome (NEO), Amiga IFF, CompuServe GIF. Pictures can be load to screen or to the Clipboard. By loading to the Clipboard (the same place images go when you Copy them), you can Paste the graphic into a frame, or even use it as a drawing tool!

In addition to the above mentioned graphic formats, Prism Paint can save images contained in the Clipboard as an IFF .BLK (compatible with Degas) or as C, Assembly or BASIC source code. When saving BASIC source, you have the ability to select the starting line number and increment.

Prism Paint's ability to load GIF pictures makes it a fairly useful picture converter. If the GIF you are loading has the same or less colors in it, then Prism Paint will keep those colors. Otherwise, the picture is converted to gray scale. You also have the option to resize the picture to half or double its size. While not as versatile as some stand-alone GIF viewers, Prism Paint is just about the *fastest* GIF loader I've ever seen.

Another welcome touch to Prism Paint is that there are keyboard equivalents for nearly every option. You can hit a single key to select individual drawing tools

and for frame manipulation. For instance, pressing Insert inserts a frame in your animation, Clr/Home clears the current frame, etc.

Hitting the Undo key while at the Work screen removes the most recent change you made, restoring your picture.

TT users have the option of loading the program buffers and animation buffers into ST or TT Fast RAM.

So, What's Missing?

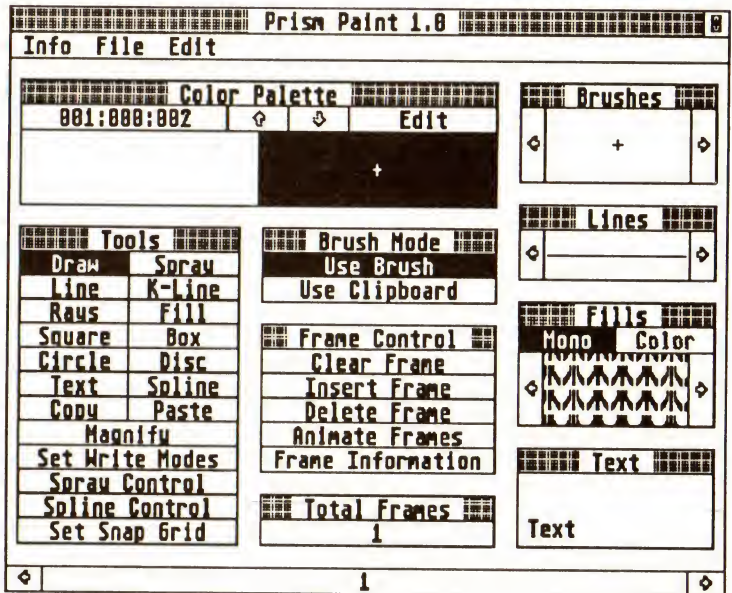
While I consider Prism Paint to be the best drawing program I've seen on an Atari ST/TT, there are a few things I'd like to see added.

First, I'd like to be able to manipulate graphics stored in the Clipboard. For instance, I'd like the ability to rotate, shrink and stretch the clipped image. Also, the ability to copy odd-sized objects (lassoing) would be nice.

A feature that allowed for gradation fill patterns would be nice, too—one where you select the beginning and ending color/shade and Prism Paint calculates the inbetween shades and applies them either as horizontal, vertical or radial shading.

While in the Work area, it would be nice if Prism Paint had an option to display the actual coordinates at which your brush was located on the screen. This would be highly useful when working on individual animation frames.

Without the above suggested additions, Prism Paint is still my top pick for drawing programs on the ST/TT. I've run into absolutely no problems/bugs in Prism Paint (and it's version 1.0, even!). Everything works as advertised in the manual. The software performs flawlessly in every resolution on every machine I've tested it on—from a 520ST with TOS 1.0 to a TT with TOS 3.05. With a number of 16.7 million color boards hitting the market at fairly reasonable prices, Prism Paint is the obvious choice for anyone thinking of going the 24-bit color route.



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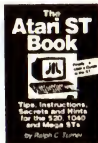
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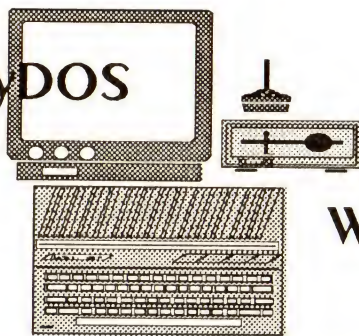
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SPARTADOS vs MyDOS



Which ONE is BETTER?

John Kasupski (WNYAUG)

In a past issue of Atari Interface Magazine, Tim Feenstra of GRASS made the statement that SpartaDOS is only marginally better than the public-domain disk operating system MyDOS, which costs much less. This article will explore whether or not that statement was entirely accurate.

First of all, however, I should let you know that this article is not entirely objective, because it is being written by an author who is:

A confirmed SpartaDOS user,
and
Fortunate enough to have a girlfriend who has more sense than to unplug the MIO.

Despite that, I will attempt to make an unbiased comparison between the two disk operating systems, because what is better for one user is not necessarily better for another.

Costs

First of all, MyDOS is indeed in the public domain, which means it costs much less than the commercial SpartaDOS in either disk-based or cartridge-based versions.

MyDOS does support true double density, it supports subdirectories, and it supports large capacity drives. You *can* use it with an MIO, hard drive, DSDD drive such as the Atari XF-551, etc.

The MyDOS menu is very similar to the Atari DOS 2.5 type of menu with which most Atari users are familiar. This means that an Atari DOS user will have less to learn when converting to MyDOS

than he or she would have to learn if converting to SpartaDOS.

On the other hand, users familiar with MS-DOS on the IBM will find it easier to adapt to SpartaDOS, because SpartaDOS is a command-driven DOS.

Also, as a menu-driven DOS, MyDOS is still a "small system" type of DOS. If you plan on adding one or more hard drives to your system, or an MIO, or have a memory upgrade and want extended RAMdisk support, you'll be a lot better off with the added speed and flexibility of SpartaDOS.

If you're primarily a game player, you'll find that a lot of game programs won't work with SpartaDOS because of memory conflicts. SpartaDOS loads itself into memory and then moves the MEMLO pointer up to protect itself. If the program obeys the MEMLO pointer, like Atari Corp. says to do in the manual, then the program will work with SpartaDOS as well as it would with DOS 2.5 or MyDOS.

On the other hand, if you're like me and installed a 256K memory upgrade in an Atari 800XL, connected a 256K MIO, and plan on connecting a 20Mb hard drive, you're going to get frustrated with MyDOS rather quickly. The way in which SpartaDOS handles subdirectories is much more convenient.

SpartaDOS also supports batch files, multifile copying, Ultraspeed sector skewing on modified drives, and a variety of densities, all of which are either missing entirely or much less conveniently supported with MyDOS.

This is not to say that MyDOS is entirely useless; to say this

would be a disservice to the readers of this article. MyDOS is a low-cost alternative which provides many more desirable features than the original Atari DOS.

But to say that SpartaDOS is only marginally better than MyDOS does not strike me as entirely correct. If you are a menu addict, the SpartaDOS Toolkit provides a DOS 2.5 lookalike menu that lets you enjoy the flexibility and power of SpartaDOS along with the ease of operating from a familiar menu environment. With MyDOS, there is no command processor—you're just stuck with the menu, and MyDOS is missing a lot of the features supported by SpartaDOS.

In the final analysis, it depends on what you're using your Atari for. If the major use of your DOS is to load the latest PD/ShareWare adaptation of Tetris, MyDOS may suit your purposes just fine, and it's definitely an improvement over Atari DOS 2.5.

However, if you're doing word processing or database construction, or if you want to run a BBS using BBS Express Pro! and you have megabytes of hard drive space, then SpartaDOS is well worth the investment in terms of user convenience alone, even before you consider other features missing from MyDOS.

In other words, you choose a DOS the way you choose a word processor, database, or any other application program: you choose a program that best suits your own needs. If MyDOS gives you everything you need in a disk operating system, then more power to you.

As for me, I'll take SpartaDOS anytime over any other DOS I've seen for the Atari 8-bit.

3-D MODELER FOR 8-BIT ATARI!

All of the pictures appearing on this page (except the top right) are unretouched TV-screen photos of 3-D models rendered by a new commercial 3-D shaded-modeler for Atari 8-bit computers.

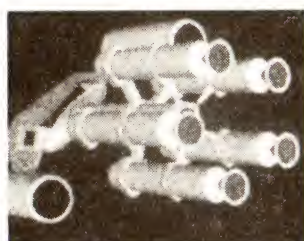
Two new programs!



*Pitcher, rendered by
MODEL BUILDER
(TV Screen Photo)*



*Same Pitcher, rendered
by SURFACE SHADER
(TV Screen Photo)*



*Space ship,
5 cluster rockets
(TV Screen Photo)*



*Close up of cluster rockets
from the top
(TV Screen Photo)*

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*Photo of actual bust
of human head*



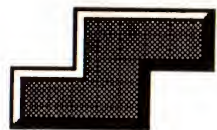
*3-D model rendering
(TV Screen Photo)*



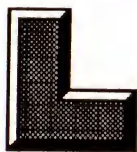
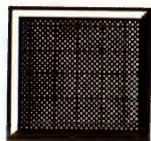
*3-D Model Rendering
(TV Screen Photo)*



*3-D Model Rendering
(TV Screen Photo)*



Bill Rayl



DREDIS



The 8-bit marketplace ain't what it used to be, but there are still some very excellent programs being released. One area where the 8-bits have always been superb is graphics, and hence, some of the all-time best games I've ever played were on the 8-bit Atari. KE-Soft from Germany—through their US distributor, Software Infinity—has released a number of games for the 8-bit Atari. One of those games is DREDIS. The game runs on any Atari 8-bit with at least 64K and comes on one SS/SD disk with *no* copy protection, so you can make legitimate backups for your personal use.

The documentation is comprised of a simple two-page description printed on the inside of the game package's cover. On these two pages, you're given all the info you need to load and play the game, as well as a point value chart for placing tiles, filling lines and completing levels.

Gameplay

Anyone addicted to Tetris and its variations is guaranteed to like DREDIS. In this game, you rotate Tetris-like geometric blocks in an attempt to fit the blocks together, just like Tetris. Unlike Tetris, however, the blocks fall from the top center of the screen and are moved horizontally into one of two side "wells." If you can imagine playing Tetris with the monitor turned sideways, with the ability to move your blocks left or right, you've got a good idea of what's going on in DREDIS.

The basic premise is to align the blocks in such a way to fill vertical columns with the blocks. These filled columns then disappear, making way for more blocks. Once a certain number of columns have been filled in on both sides of the "well," you move on to the next level. The number of columns you need to fill changes with each level—for instance, you fill five columns on Level 1, 10 columns on Level 2, etc.

As if that weren't enough, the higher levels contain barriers that you have to circumnavigate. At these higher levels, the game gets pretty intense. A two-player option allows you to alternate play between yourself and a friend.

Graphics and Sound

The software KE-Soft is putting out contains commercial-quality graphics and sound. DREDIS is no exception. The geometric blocks in DREDIS are almost metallic-looking in quality...they look like little blocks made made of solid steel. The main screens for each level are simple, but clean and colorful—they don't get in the way of the game. The music changes for each level. In some games, the music actually hinders gameplay and you quickly wish you could turn it off. In DREDIS, the music fits into the gameplay quite well...it might even add a bit to the pressure you feel while playing. It sure worked on me.

Conclusions

DREDIS is very (and I mean *very*) addictive, just like its Tetris cousins. The game concept is simple, but the "strategy" element combined with a feeling of ever-building pressure to fit blocks together quickly makes these games arcade-style classics.

DREDIS delivers all that you would expect from a Tetris variation. KE-SOFT and Software Infinity have a real winner in DREDIS. At a cost of only \$10.50, this game is a super bargain.

Yes, if you're a Tetris lover, DREDIS is a game for you! And, if you're one of the few gamers on the planet who haven't played Tetris or a variation of Tetris yet, you gotta see what you've been missing!

R-Time 8 Battery Replacement

Rick Reaser (P3ACE)

A couple days ago, I was word processing away and my time/date display line started to go nuts. The day of the week and the year started to toggle erratically. I had gotten my R-Time 8 cartridge a couple of years back and figured the battery was going bad.

After carefully separating the two halves of the cartridge, I measured the voltage across the battery and found it to be only 2.2 volts. I had to keep the two halves of the cartridge fairly parallel when separating them to keep from bending the pins off.

Next, I removed the circuit card

from the cartridge half. I unsoldered the battery from the card with a low voltage soldering iron. The battery has leads already fastened to it which I tried to unsolder. My plan was to reuse them on the new battery and solder the assembly back to the card.

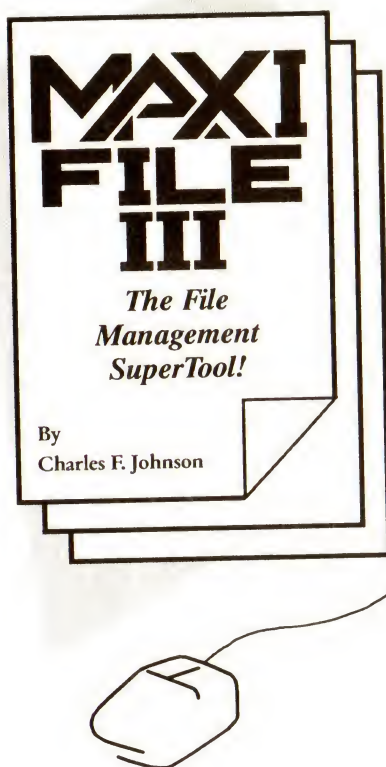
Those leads must have grown onto the battery since they refused to come off, no matter how hot I got them. Fearing that more heat would cause the battery to explode I trundled to my local electronic parts store.

To my surprise, Centennial Electronics, here in Colorado Springs [(719) 633-4666] had a battery holder for the 3V battery and the pins on it lined up with the holes on the circuit card. Amaz-

ing!!! The battery holder is made by Keystone and is part number 106. It only cost \$1.49.

After sucking the solder out of the two circuit board holes and making sure that the plus lead was going to the plus hole (clearly marked on the circuit card), I soldered the new battery holder in. Next, I slipped in the new battery, making sure I got the polarity right.

I snapped the card into the cartridge case and the cartridge case halves back together and things were good as new. Clearance between the new holder and the case was no problem. Now, the next battery change will be a real snap.



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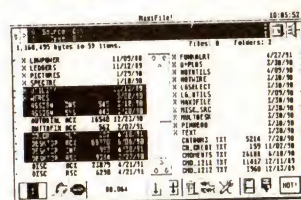
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Why Not A Generic Software Engineer's Forum?

Sitting here in my classic padded office chair and reflecting upon the extent of my success over the past dozen years... deriving a good deal of contentment from the manifold projects completed...saddened by the nearly complete lack of acceptance accorded my work...frustrated by the token pittance received from my whimsical marketing attempts...it dawned on me with the clarity of a high desert sunrise that it was not my expertise that was at fault, but rather my complete lack of social functionality! It also occurred to me that I was probably not alone in this respect.

There are, undoubtedly, a large number of people in the same predicament, and the numbers unquestionably swell with each passing day. It would be interesting to discover just how many folks there are out there who qualify as 'non-social programmers'.

Non-Social Programmers

By definition, this would be any person who possesses at least a professional ability as a programmer/developer—the home software engineer—while also having a social life that is practically non-existent. These people, like myself, spend endless hours sequestered in their own private world of the monitor and keyboard contemplating the mathematical correlation between two functions to the exclusion of all else.

I do occasionally interact with my family. I fix dinner and clean house as time permits, while my spouse earns the bulk of our income (barely enough to survive!) and the kids pester me for some "quality time."

If the people in question happen to be unencumbered by the responsibilities of family life, they would probably live in a world of dust and spiders much like the alchemists of old! They may grudgingly toil away at some job that allows them access to our favorite environment

(the computer) or, TIME\$() forbid, some unrelated menial task that may provide a survivalist income that barely supports our idealised world at home.

In any event, unless we happened to be born into a comfortable stipend, our lifestyle barely supports our fantasy of a carefree life dependent on the income from our endeavors.

It's Good Software!

The software these people often develop from personal inspiration to finished runtime package seldom, if ever, sees the light of day as more than free-ware or shareware while producing little or no income.

Is this because the software we build is mediocre at best? High level or assembled trivia? Insignificant contributions to the realm of the bland or useless?

Is our effort lacking in colorful interface with no attractive bells and whistles? Text-button GUIs and single-word prompts? White-on-black displays for the same old data? We think not!

In some cases the above speculation may hold true. However, in most instances, the problem lies with marketing alone! There are many cliches in the world of marketing, such as selling "the sizzle instead of the steak" or "frame it any way you want—it's the siding and trim that sell the house..." and an endless array of other such quotes.

For the most part, these cliches hold true, much as it would be nice were it not so. But, aside from the color and variety we build into our packages, we are not actively involved in the marketing at the commercial level. We are, however, involved at the personal level. We must market ourselves!

Therein lies our great shortcoming. Unless, through some quirk wherein we have achieved some sort of positive notoriety, we remain unknown and our

David J. STUART

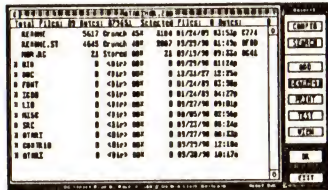
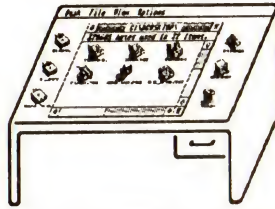
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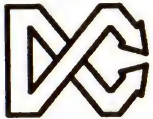
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ariety, we remain unknown and our feeble attempts to interest any marketing or distribution firm in our work consequently go unnoticed or, at best, wind up overshadowed by the work of someone more gregarious or better connected that will be assigned a marketing priority.

The Key is Marketing!

The solution that comes first to mind is undoubtedly the one most of us find anathema. It lends itself least to practical implementation. That is, we should get off our duffs and begin to socialize. Yes, socialize! Get out there and promote our work and ourselves with the celerity of a Madison Avenue promoter! Exercise our latent wills and overcome whatever paranoias or neuroses prevent us from establishing a viable credibility.

The downside of this solution is that most of us have tried it with little success. We are not gregariously extroverted social animals and by dint of our appearance, demeanor, or some other personality trait, our efforts are doomed to fail.

Another, more viable solution is to establish a relationship with that tested source of representation—*The Agent*. The drawback here seems to be that there are no honest, reputable, sincere and available agents out there specifically for the benefit of our class of software engineer. There are, beyond a doubt, any number of well-connected professional people out there in the real world of commercial marketing who could well fit the bill, but locating some and convincing them to undertake such a scheme is another issue altogether.

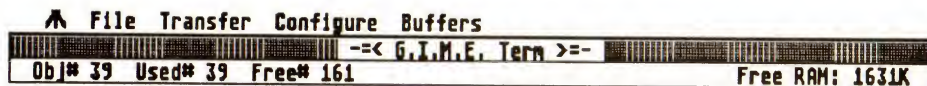
One very real possibility now would seem quite feasible. What we need to do is become joiners. We need a place to bring our efforts to the attention of those who count, thereby becoming known.

Several such established places have come to mind and the one that seems to ring the clearest is the Public Media. Within this province, we should seek out an online service where we might establish a Generic Software Developers' Forum.

For those of us unable to financially support regular participation at this level, there are any number of generic, as well as specific, professional journals where we might maintain a regular Exposure Column. Such a column might be in the form of a Q&A Forum that also lists all participants along with brief credentials and potentially marketable works.

Still, even if there were such 'tools' as these available to us—and there are specific Forums and Magazine Columns currently available—we are still faced with that bottom line which is the central bone of contention; we must make ourselves and our work known. If we do not make the effort to join in the discussions or present our work where it can be scrutinized by those in a position to promote it, nothing will change. To do this is a decision each of us must make on our own!

G.I.M.E. Terminal



MICRO CREATIONS

Bob Retelle (WAUG)

In the ST world, it's always good to see new and innovative programs, and the G.I.M.E. (Graphics Interface Modem Environment) Terminal program from Micro Creations is both of these.

Unfortunately, after using it for a short while, I'm not entirely convinced it's particularly useful, at least as an advance over terminal programs we already have.

As some of you may already know, I've been heavily involved in telecommunications for many years now, and one question I'm almost invariably asked is which telecommunications program I use. My answer, in 1986 when I first got my ST was the same as it is now. I use Flash, from Antic Software, exclusively. Thus, in any test or review of new telecommunications software, Flash would be my standard for judging the effectiveness and usefulness of the new product.

I've tried many different telecom programs, and always come back to Flash. That's not to say I wouldn't use a different program if one came along that was as easy to use as Flash and contained all its features; just that, so far, I haven't found such a program.

Features

G.I.M.E Terminal does indeed have several new features that Flash does not. Among these is the ability to draw and transmit graphic screens and a very extensive and powerful script language.

When you boot up the program, you first see the Capture

"Creating New Worlds"



screen. From here, you can access all the other screens and features. G.I.M.E. Terminal maintains the "Flash standard" of using the right mouse button to flip between the Capture screen and the Terminal screen. At the Terminal screen, pressing the left mouse button brings up the Dial Directory, again just like in Flash.

Each screen has the normal menu bar across the top with drop-down menus for functions which are common to all screens, and a graphics menu at the bottom with icons for specific functions on that screen. From the Capture screen, you can access the Text Editor screen.

Unlike Flash, you must leave the Capture screen to edit text. Instead of using one very large buffer, as Flash does, G.I.M.E Terminal provides four separate buffers, each of which is divided into "sub-buffers" as you add text and graphics.

The Text Editor provides the features you'd expect, including setting margins, changing type style and color, and importing and exporting text.

The Block icon brings up another menu of icons, revealing operations you can do on blocks of text. Among these operations are

changing the case of the text, changing type style of just the block, cutting, pasting and deleting. Block save and load is supported, and you can send the block out the modem in several different formats.

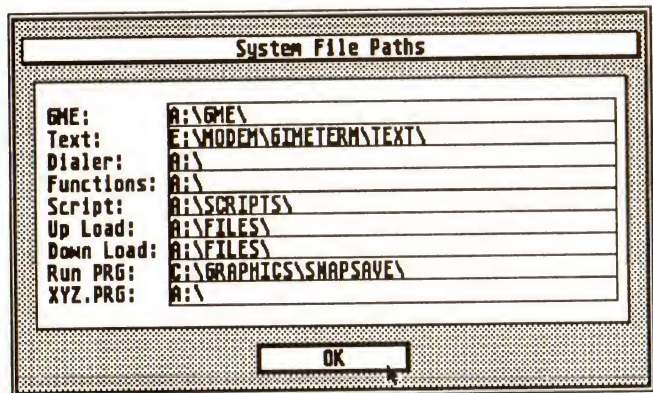
Two features I find very useful is the ability to strip returns from the block of text and to turn the scroll bar on the side of the screen on and off to give you a full view of the text. Unlike Flash, however, 80 columns is the widest you can set the margin.

Graphics

The Graphics screen brings up another icon menu displaying many different drawing tools for creating graphics in the Capture buffers. You can draw boxes, circles or polygons, either filled or unfilled, add text and change colors and patterns. Once a drawing is completed, you can edit it to change the size, color and orientation of the objects on the screen.

The graphics in G.I.M.E. Terminal are "object oriented," not the "bitmapped" style of a program like DEGAS. This is due to the way the graphics are transmitted by modem, and takes a little getting used to.

The drawing process is much



more "CAD-like" than just freehand drawing. I find the pictures created with the tools available to be somewhat blocky and "stick-figurish" in contrast to a DEGAS or GIF image, although for its intended purpose—quickly transmitting graphics by modem—the pictures are quite acceptable.

One very interesting feature is the ability to "trace" an existing DEGAS picture in G.I.M.E. graphics. Unfortunately, the results are likely to be disappointing, depending on the complexity of the original DEGAS picture. The best you can hope for is a close approximation.

When you transmit a graphic image, the picture is sent, not as a bitmapped image, which would take 32K for a typical ST screen, but as a series of characters which "describe" the picture. It's interesting to watch as the sample graphic screen is loaded from disk, and drawn object by object.

Script Features

The powerful script language is essentially an implementation of the 'C' programming language, which is somewhat of a mixed blessing. It offers great power (you could probably actually write a terminal program in G.I.M.E. Terminal's script language), but it requires you to either already know 'C' or learn to program it before you can use the script language effectively. The manual describes the process fairly well, but it certainly won't be easy for a beginner to do anything very useful.

Bread and Butter

Well, so much for the fancy features, how about the "bread and butter" functionality of the program—its ability to send and receive data by modem?

The menubar has all the normal functions of a telecom program, including a few that Flash is lacking. Under the File menu item is a selection for Disk Utilities, which gives you access to things like selecting a drive, getting a disk directory, showing free space on the disk, renaming and deleting files and the main thing Flash is lacking—the ability to format a disk.

Also under the File menu is Load and Save, which are used to access and save the Capture buffers, the phone Dialer, Function Key definitions and the Printer and terminal configurations. You can Run an external

program or script file on disk or run a script file in memory.

The Transfer menu item lets you Send text in ASCII or run the external transfer program. G.I.M.E. Terminal does not have any transfer protocols built in. Instead, it uses a customized GEM version of the popular XYZ.TTP program to do its uploading and downloading. While this gives the program the flexibility of being able to update to new protocols by only changing the external program, it can be *very* slow if running from floppy disk. You have to wait while the external protocol program is loaded from disk every time you want to download or upload.

One outstanding feature of G.I.M.E. Terminal is its dial directory. The directory lets you create subdirectories, or folders, to organize your dialing. For example, if you have a number of BBs in California that you call regularly, you can create a directory called CALIFORNIA that contains only those numbers.

Finally, from the main menubar, you can select which of the four Capture buffers will be open to receive text from the terminal screen, and which of the four you will be working in on the Text or Graphics screens.

As mentioned earlier, pressing the right mouse button brings up the terminal screen, where all the real action takes place. A status bar at the top tells you which Capture buffer is open and both the current time and amount of free RAM available.

Interface

So, why won't I be using G.I.M.E. Terminal in the future, even though it does have some features lacking in Flash? Well, for one thing, I disliked having to switch to the Capture screen to do basic things like looking at a disk directory or even to turn the capture buffer on and off.

While the Text editor, Graphics editor and Capture screen all have ALT key combinations to access the menu items, the Terminal screen does not. Flash allows both a "command line" interface for most functions and ALT key combinations for many.

For example, getting a disk directory in G.I.M.E. Terminal involves returning to the Capture screen by pressing the right mouse button, selecting the File menu item, then clicking on Disk Utilities (or pressing ALT SHIFT T), then clicking on the Select Drive button (if you'd like to see a different drive from the current one), selecting the drive button, then clicking on Directory.

If you use the Universal Item selector, or have another item selector that lets you choose drives, you could skip the Select Drive step.

In Flash, the same operation could be done by pressing the Insert key, then typing DIR A: on the command line. Likewise, turning the Capture buffer on and off in Flash is a simple matter of hitting ALT C. (Of course, if you *must* use the mouse and GEM functions, you always have that option too in Flash.)

Performance

Ok, so in my opinion, G.I.M.E. Terminal feels more awkward to use than Flash. How does it perform online?

Well, as you again may know, I'm a Sysop in the Atari Forums on CompuServe. As such, I do a lot of downloading to check out files, so naturally my first call was to CIS. While the manual mentions GENie and BBSes, it soon became apparent that G.I.M.E. Terminal hadn't been tested on CompuServe. The first thing I discovered was G.I.M.E. Terminal has no provision for stripping the "high bit" from incoming characters, which results in a real mess on the screen if you log on using RS-232 parameters of 8 bits, No Parity.

Ok, so I called back after setting to 7 bits, Even Parity. Much better, perfectly readable text this time. The next thing I tried was to download a file. Using the 1K XMODEM option in XYZ.PRG, I started the download, and waited...and waited. No luck, so I tried again. Still nothing. Finally, it dawned on me that G.I.M.E. Terminal was not switching automatically to 8 bits for the transfer, as most terminal programs do. CIS was going into 8 bit mode, but my end was still at 7 bits, which just doesn't work.

I finally did manage to get G.I.M.E. Terminal to download from CompuServe, but this was the procedure: First, in 7 bit, Even Parity, I had to tell CIS to send the file, then quickly hit the right mouse button to go back to the Capture screen, where I had to pull down the Configure menu and click on RS-232.

Once in that dialogue I had to change the Parity to None, and the Word Length to 8 bits, then exit out of that, pull down the Transfer menu and click on GIMEXFER.EXT. After waiting for XYZ.PRG to load, I had to click on Xmodem because it defaults to Zmodem every time (even having saved the options to disk), then click on OK...and then pray that CompuServe hadn't timed out already.

Once the download completed, I had to run through the same procedure to set the parameters back to 7 bit, Even Parity so I could once again read the screen. And this had to be done for *every* file I wanted to download. Needless to say, I won't be using G.I.M.E. Terminal for CompuServe.

It looks as if there are script files for most of the normal (DIR, Diskfree, etc) functions, including the one I need, already on the disk, although the manual makes no mention of how to use them.

The Manual

Sigh...the manual. Until I read the G.I.M.E. Terminal manual, I thought the original GFA BASIC manual, roughly translated from German, was the worst manual I'd ever read. I was confused several times while reading some of the sections, and remember, I'm not exactly a beginner in telecom. The style and grammar are somewhat rambling and annoying.

Maybe it's just personal taste, but when documentation of the Transfer dialogue box goes off on a tan-

gent to describe the whole world of BBSes and how wonderful it is to be able to download thousands of programs right into your own computer, instead of just describing the buttons in the box and telling you how to use them, it's a little irritating.

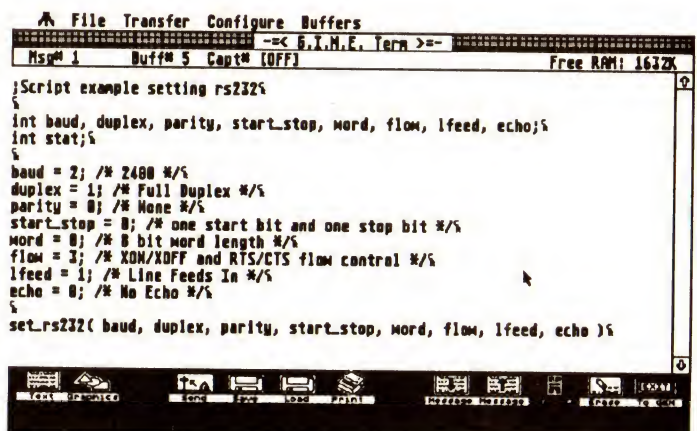
It also would have been much better if the manual had been proofread, preferably by someone who knows something about grammar. Just spell checking isn't enough.

Especially irritating were the dyslexic mistakes dealing with where things are on the screen. I fumbled around a bit in the Dial Directory when the manual told me to double click on the folder marker to the right of the folder to delete. I couldn't find anything to the right of the name, but clicking to the *left* finally did the trick. Then, the description of the Exit icon says it's standardized throughout all the screens...at the far left of all screens. Well, not exactly. It's at the far *right*. Maybe it's just being picky, but I usually expect a commercial product to be better than that.

Speaking of commercial products, it's *really* annoying to see misspelled words on the screen, especially if it's a commercial program. I don't know if Micro Creations is responsible for the screens in the XYZ.TTP program or not, but it's "I before E, **except** after C" when you're spelling "Receive." I have to wonder who caused the mistakes, since the name of the XYZ.TTP programmer is also misspelled.

Lastly, while the graphics features of G.I.M.E. Terminal are interesting, they're only useful for transmitting graphics to another G.I.M.E. Terminal equipped ST. To anyone else, the graphics come across as garbage. Micro Creations is apparently working on a BBS program that will use the same graphics, but until they become commonly available, the graphics capabilities in G.I.M.E. Terminal will remain an interesting curiosity.

I might be able to recommend G.I.M.E. Terminal to someone who never plans to use CompuServe, who likes to do a *lot* of mousing and clicking, and who knows 'C' programming. As I mentioned before, I plan to continue using Flash.



THE FONT RESOURCE

SAFARI DISK #3 (for PageStream)

Lightline Roman

!"\$%&'().-0123456789:;<>?ABCDEFGHIJKLMNOPQRSTUVWXYZ
_abcdefghijklmnopqrstuvwxyz|~...ß
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ à
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The Font Resource spotlights some of the latest font releases for your favorite ST DTP packages.

This month, we feature two more of the many disks available from Computer Safari under the Safari Fonts title.

Computer Safari is, by far, the most prolific font supplier for PageStream. In fact, most of the font disks sold by Soft-Logik actually originated from Computer Safari and its president, Jay Pierstorff.

Many of the newest Safari Fonts disks contain font versions for both Calamus and PageStream. The quality of all their fonts is excellent. You really can't go wrong with any of them!

For purchasing information on any of the fonts showcased here, or for details on other font disks, contact Computer Safari, 606 W. Cross St., Woodland, CA 95695, phone (916) 666-1813.

Lightline Roman Italic

!"\$%&'().-0123456789:;<>?ABCDEFGHIJKLMNOPQRSTUVWXYZ
_abcdefghijklmnopqrstuvwxyz|~...ß
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Lightline Sans

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_abcdefghijklmnopqrstuvwxyz|~...ß À Á Â
Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ à á â ã ä å æ
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SAFARI DISK #4 (for Calmus & PageStream)

Micrographic

!"\$%&'().-0123456789:;<>?ABCDEFGHIJKLM
NOPQRSTUVWXYZ_abcdefghijklmnopqrstuvwxyz|~...ß
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ à
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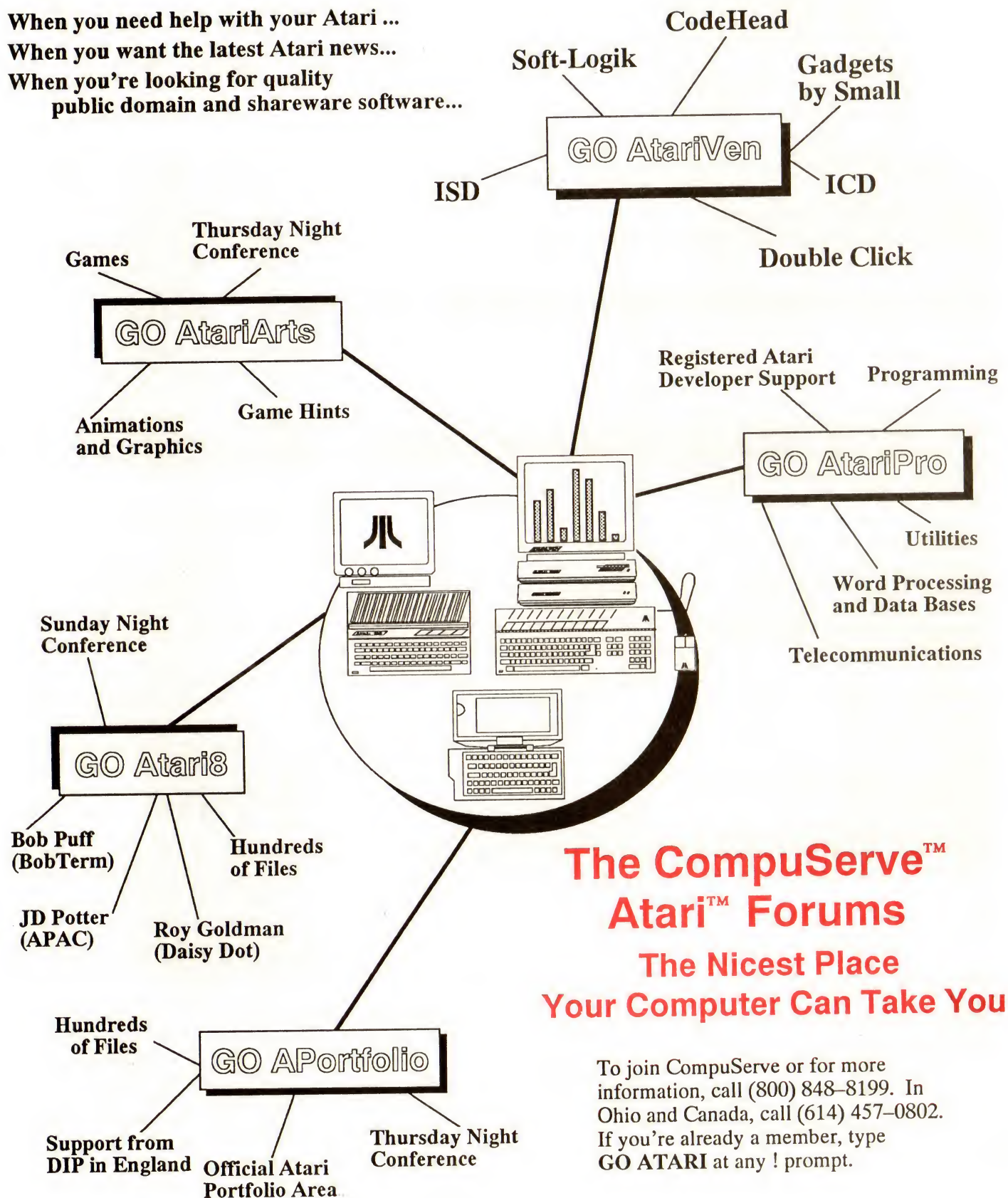
Micrographic Bold

!"\$%&'().-0123456789:;<>?ABCDEFGHIJKLM
NOPQRSTUVWXYZ_abcdefghijklmnopqrstuvwxyz|~...ß
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ à
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CAROLE

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Ü Ý Þ ÿ

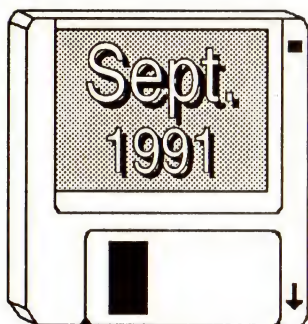
When you need help with your Atari ...
 When you want the latest Atari news...
 When you're looking for quality
 public domain and shareware software...



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 Your Computer Can Take You

To join CompuServe or for more information, call (800) 848-8199. In Ohio and Canada, call (614) 457-0802. If you're already a member, type GO ATARI at any ! prompt.



AIM ST Disk of the Month

All files on this disk are self-extracting LZH archives created with Double Click's Self-Extracting ARC program DC SEA! To use these programs, simply double click the files. Then, click on Extract and select the drive/folder to which you want the extracted files saved. Click on Verbose to get a list of the files in each archive or Exit to abort.

Here's a short description of the files on the September '91 disk. For more complete docs, see the text files contained in most of these archives.

BACKGAMN.APP—Online backgammon, lets you play over the phone lines with a friend and a modem. You can also play against the computer or set up custom games. Mono only.

CRYPTFNT.APP—Two complete fonts for PageStream. Contains the .FM (font metric), .DMF (dot matrix), .HI (screen), .PSF, PFA(type 1), and .PFB(type 3 for Ultrascript) files. Cotton is caps only and Crypt, which looks like 'Tales from the Crypt' contains upper and lower case. Shareware.

DCGTP.APP—DC GTP (GEM Takes Parameters) allows you to enter a command line (or use the file selector to choose a file parameter) for GEM programs. This is similar to the NewDesk (MSTE and TT) new program type .GTP extension. 100% assembly, ST, STe and TT compatible from Double Click.

DCHOMEY.APP—DC Homey lets you find your mouse instantly! Just press <ALTERNATE>+<CONTROL>+<LEFT SHIFT>+<H> at any time and your mouse is centered on-screen. Great for STacy owners. 100% assembly, ST, STe and TT compatible from Double Click

DEMOLITN.APP—DEMOLITION MAN, a commercial-quality game by Clayton Walnum. Try to discover where the bombs are hidden, without blowing yourself up! Low rez only. Shareware.

DIRDRIVE.APP—Direct-Drive makes managing files on floppy or hard disk simple, quick and painless. Disk librarian that can handle any drive. Lists can be saved, searched, sorted and printed. You can also print disk labels, format disks and much more! Runs in any resolution with at least 80 columns. Shareware from Robert Birmingham and Dave Groves.

DOUBLE.APP—Double the number of lines of resolution on your screen—color becomes 640x400; monochrome becomes 640x800! Shareware from Lars-Erik Osterud of Rykkinn, Norway. Works only on STes or newer systems.

FORTTRAN.APP—Full FORTRAN 77 package with compiler, linker, runtime and math libraries and manuals (German and English). Use of this package is restricted to non-commercial, non-military uses.

MATHQUIZ.APP—MATH-QUIZ provides an excellent vehicle for your child's math skills intact during the summer months. The program encourages frequent use and good performance. Medium rez only.

MDATE.APP—Make*A*Date is a Scheduler/Diary/Phone Book/Notes Database and TODO List manager rolled into one. The package is built around a Desktop that can be set up to run external programs.

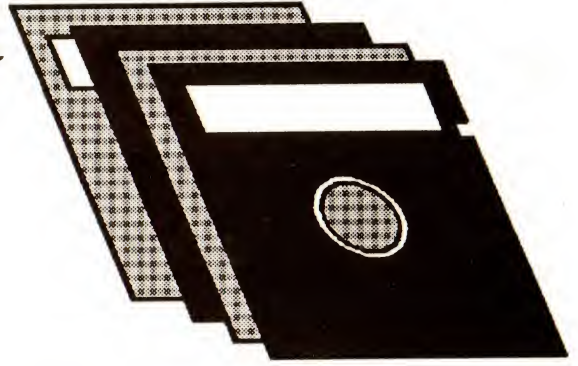
SCSIBOOT.APP—Fixes double-booting syndrome with SCSI hard drives. Shareware by Art Zeigler. (This program was mentioned in the Aug. '91 issue of Atari Interface.)

SILKMOUS.APP—Provides smooth, resolution-independent acceleration far superior to anything offered by other mouse accelerators. This is a Configurable, timed demo. Get the "uncrippled" version for only \$10.

ZESTPOKR.APP—Here is another demo using the ZeST interface (NeXT look-a-like). This mono game gives you draw poker, high card and a one armed bandit. Freeware. Have fun!

Readers can purchase this disk from their local AIM Participating user group or by sending \$6 (\$5 + \$1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the September '91 disk when ordering.

AIM 8-Bit Disk of the Month September 1991



Each AIM 8-bit Disk of the Month is a single-sided, single-density "floppy" packed with software. To extract files in the ARC format, you need the UN-ARC.COM utility and to decompress files with a DCM extension, you need DISKCOM3.UTL (available from most BBSes, user groups or on the April/May '91 AIM 8-bit Disk).

Here's a short description of the files on the September '91 disk. For more complete documentation, see the text files contained within most of the ARChives.

Side 1

BIBLE1.ARC—Two complete Bible verse games in BASIC. README file explains how to add your own verses to the game/create new ones. Also, see BIBLE2.ARC on Side 2.

MMRG22.ARC—Mail Merge macro system for TextPro 4.56XE! Put your mail list in one bank of memory and your letter in the other and press START. Docs included.

RGBPAINT.ARC—A 4096-color drawing program for the 8-bit! Requires MYDOS, Jeff Potter's COLRVIEW, Turbo Basic's RUN-TIME.COM and at least 128K to run. Pressing SHIFT-? gives you a built-in help screen.

SPACEGAU.OBJ—PD game written in 1984. Unfortunately, the programmer chose the name GAUNTLET, and due to the appearance of the arcade game of the same name, it passed into obscurity. Complete docs enclosed.

Side 2

BIBLE2.ARC—Two more complete Bible verse games in BASIC. Test your knowledge of "the good book."

KERMIT65.ARC—Version 3.7 of Kermit 65, an 80-column telecom program. Docs in the ARC describe some changes and the program in general.

PSTODD3.ARC—Useful utility to convert PrintShop icons for use with Daisy Dot III. Program by John McGowan. [NOTE: This program was listed on our June '91 disk, but there wasn't enough space left on the disk for the complete program. So, here it is in its entirety.]

Readers can purchase this disk from their local AIM participating user group or by sending \$6 (\$5 + \$1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the September '91 disk when ordering.

AAAUA ATARI 8-BIT USER GROUP



Alamo Area Atari User Association (AAAUA), P.O. Box 79-1426, San Antonio, TX 78279-1426

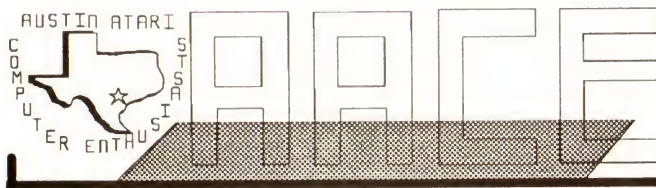
The Alamo Area Atari User Association (AAAUA) is an Atari 8-bit user group serving primarily the greater San Antonio area. General Membership meetings are held on the first Tuesday of each month at the Balcones Heights Community Center, 107 Glenarm, San Antonio, from 6:30 to 9:30 PM. Each third meeting we have a swap meet and computer workshop in lieu of the informal presentation. AAAUA maintains a Library of about 700 disk titles. Each month we publish (FR)ANTIC covering happenings of local interest as well as other topics, both technical and non-technical. Members also receive a subscription to AIM as part of their member benefits. Dues for family membership are \$24 per year or \$15 for six months. Dues for Subscribing membership are \$15 per year domestic and \$18 per year for most foreign countries. For further information write AAAUA at the above address or call Al Sherrill, President, at (512) 492-6633, or Thelma Sunvison, Executive Assistant, at (512) 344-3522.



ALBUQUERQUE ATARI COMPUTER ENTHUSIASTS

President Richard M. Houser (505) 299-3977
16bit Vice President Everett Schnetzer
8bit Vice President Ed Skeans
Secretary/Treasurer Mike Evans

General membership AAACE members meet twice monthly, on the first Saturday and third Tuesday of each month. An 8bit meeting is held on the second Tuesday of each month. On the first Saturday of June and December, a Swap Meet is held. Dues are \$20 a year payable in January. Members receive an AIM subscription, access to our 16bit and 8bit PD library and membership in the ASTRO BBS (505) 260-0448 Club membership is at an all-time high of 36.



Our new slate of Officers has generated some new activity in the Club. We have a new MIDI SIG that is six months old, and have just started our second C class. This one is different, part tutorial, part hands on. The only problems were installing the new compiler for the 8 bit users and getting the Mark Johnson C in the ST library to work at all (we didn't have anyone who spoke fluent UNIX). All in all this class was more fun than the last one.

We are still looking for a semi permanent meeting room. All of the options turned into duds because of location, size, parking, and most importantly - liability insurance (it's a killer). But we'll meet the first Wednesday since it's time for a change. Our current meeting is a combined Disk Party, General Meeting, and Officers meeting, but it gets kind of cramped both in space and time.

Both our ST and 8 Bit libraries have been revamped, with more changes coming. They will be easier to access, and have more data per disk at the same price - the ST will be double sided and the 8 Bit will be floppy (SD). 8 Bit lists are available, with new disk update lists printed as needed. Early summer should see the 8 Bit library finished with more new lists printed. Also in early summer will be the AUSTIN COMPUTER FAIR. We have attended that in the past and may this year provided we can get a lot more volunteers and more organized than last.

The Atari Clubs of Denver

ATARI CLUB OF DENVER
Executive: Chet Cox
303-399-9352
Librarian: Paul Hines
303-699-9647
Treasurer: Guy McDaniel
303-236-2366
Exec Director: Skeans
Joe McMillan
303-799-7119

STARFLEET
President: C.J. Bender
303-485-1763
Vice: Chris Quentner
303-279-4432
Secretary: Thomas Oughton
466-6344
Treasurer: Charles Robique
303-424-2857
Librarian: Verley Crutcher
(Don't ask!)

ST Interest Group
1st Speaker: Ed Fason
303-485-1763
Librarians: Lou Mendoza & Joe Ronda
Scribe: Chet Cox
Picture Drawer: Jeremy Fason

EDITORIAL MIKE
Mike McCutcheon
EDITORIAL SCOTT
Scott Anderson
JF

The Atari Clubs of Denver is an umbrella group consisting of: Atari Club of Denver, Starfleet User Group and the ST Interest Group. Atari Club of Denver meets the first Tuesday of each month. We meet at the Aurora Public Library 14949 E. Alameda Avenue in Aurora, Colorado. The meeting starts at 7:00 PM. Starfleet User Group meets the second Friday of each month. We meet at Pamona High School 8101 West Pamona Drive in Arvada, Colorado. The meeting starts at 7:00 PM.

Atari Club and Starfleet provide support for Atari 8-bit owners.

ST Interest Group meets the third Tuesday of each month. We meet at the Aurora Public Library 14949 E. Alameda Avenue in Aurora, Colorado. The meeting starts at 7PM. The ST Interest Group provides support for the entire ST computer line.

Our address is: Atari Clubs of Denver POBox 24064 Denver, CO 80224. For additional information call our BBS at (303) 343-2956, 24 hours, 300-2400 BPS.

ACCEPT

ATARI Computer Club
of El Paso, Texas

ACCEPT (Atari Computer Club of El Paso Texas) ACCEPT is the only Atari club in the entire El Paso southwest. Membership to ACCEPT is \$20 a year. A membership in ACCEPT will get you the magazine your holding for an entire year, discounts at Jenkins' Computers and on various ST publications. Technical help, and access to one of the largest PD libraries in the US are also thrown in for good measure. Special access to the STE-EP BBS, an ACCEPT members BBS is also a privilege of membership. Make checks payable to: ACCEPT 10953 Yogi Berra El Paso, Texas 79934

BBS support for ACCEPT: STEP El Paso: 915-755-STEP
STE-EP BBS El Paso: 915-821-9220

ACCEPT executive committee Steve Bruck, Tim Holt, L.R.'Pete' Rosh, Dave Davis



Atari Computer Club of Toledo club members receive, as part of their dues, Atari Interface magazine and access to the 8bit and ST public domain software libraries. Disks are \$2/8bit and \$4/ST. Non-members may purchase disks at a slightly higher cost.

ACCT meets on the second Monday of the month, from 7-9 pm at Bassett's Health Foods, 3301 W. Central Ave (Westgate Shopping Center), Toledo, OH. ST Sig held monthly at the home of David and Brenda Micka. Dates and times announced at meeting. ACCT may be contacted at 4487 289th, Toledo, OH 42611 or by calling Dave Micka at (419) 729-1891 or Michael Justice at (419) 242-7797.

President	David Micka	(419) 729-1891
VP	Michael Justice	(419) 242-7797
Secretary	Sharon Hill	
Treasurer	Rose Taylor	
ST Librarian	Brenda Micka	
Disk Drive-Thru BBS		(419) 885-3441



ACCESS

Atari Computer Club

Encompassing Suburban Sacramento

Bob Drews	(916) 423-1573	President
Ed Galvan	725-6955	Newsletter/Disk Library
Ken Helton	446-2794	Treasurer
Barry Gordon	338-1488	Modem SIG
Bob Haynes	371-1726	Archivist

ACCESS -- The Atari Computer Club Encompassing Suburban Sacramento. As usual, please call any officer if you need information, directions or even to make a suggestion. Or, you can call the ACCESS BBS at (916) 428-8662.

For those of you who don't know who we are, ACCESS is the Atari 8-bit user group for the Sacramento, CA area. We provide help and information to the local Atari community. We offer a number of meetings each month to give you more information on your computer and to answer your questions. And, of course, we are anxious for you to share what YOU know, since there always seems to be something new and fascinating in the Atari world.

Our general meeting is at 7:30 PM on the first Wednesday of each month in Classroom B of the SMUD training building at 1708 59th St, between Folsom Blvd and R Street, just off Highway 50. This is our main get-together.

Other monthly meetings are held on the following three consecutive Tuesday nights at the homes of Barry Gordon (Modem SIG), Bob Drews (Board of Directors Meeting), and Tim Naber (Disk SIG). Telephone them for additional details, but we hope you can be a part of these groups.



ATARI COMPUTER OWNERS RESOURCE NETWORK FORT WAYNE, INDIANA

ACORN, the Fort Wayne area Atari users group, meets at the Georgetown branch of the Allen County Public Library on the first Saturday of each month beginning on at 10 AM. Annual membership dues are \$18. Call our BBS at (219) 744-1396 for more information or write to us at ACORN c/o Ken Helms, 3627 Iowa Court, Fort Wayne, IN 46815.



The Atari Computer Owners of Rochester, NY (ACORN) meets on the 2nd Wednesday of each month at Brighton High School, 1150 Winton Road South. An ST Beginner's class starts at 6:45, while our 8-bit 'Basically Speaking' class starts at 7:00. Our general meeting starts at 7:30pm in room 262S, with a split into ST and 8-bit SIGs at 9pm.

ACORN has both an 8-bit and ST PD software library. Over 300 8-bit disks and over 100 ST disks are available to any individual. We operate the Dimension's End BBS at (716) 436-3078, 300/1200/2400 baud, 40 MB of online PD and shareware files. Membership in ACORN is not required to access the system.

Membership in ACORN is \$18 per year, and entitles you to a year's subscription to both the ACORN Kernel newsletter and the Atari Interface Magazine, 12 meetings, access to our 8-bit and ST PD libraries at reduced cost, and special access to our BBS. Our mailing address is: PO Box 23676, Rochester, NY 14692-0676.

President	Don Allis	(716) 293-3415
Secretary	Chris Freemesser	(716) 328-1703
Treasurer	Sam Duck	(716) 461-0544



Atari Computer Users Network

Salem, Oregon

ACUNET is the Atari Computer Users Network in Salem, Oregon. The key word in our name is "network." We are here for anyone who has an interest in actively networking with others interested in Atari computers. (It only works as well as we all make it work together, folks!) The #1 benefit of membership in ACUNET is tapping into the knowledge and talents of one another -- at our monthly meetings, via BBS, in our newsletter, one-on-one.

Annual dues are \$15 with an AIM subscription and \$10 without. Our meetings are held the fourth Tuesday of the month at 7:00 p.m. Call Ron Purdy, ST Co-Chair at (503) 588-7509 for the current meeting location and other information.

Local BBS support includes the Atari SIG on the Salem Public Library BBS - (503) 588-6130, Page BBS - (503) 363-0171, and The Jungle BBS - (503) 393-4274. Want more information about ACUNET? Write to Ron Purdy, 2662 East Nob Hill Drive SE, Salem, OR 97302.



Regular meetings are held at the VAFB Federal Credit Union, Vandenberg Village, California on the first Monday of every month at 7:00 P.M. Dues are \$10 for individual or \$15 for family membership. The Atari Federation maintains a PD software library for both 8-bit and ST computers.

President
Vice President
Secretary
Treasurer
Newsletter Editor
16-bit Librarian
8-Bit Librarian

Phil Rominger
Bob Ribortone
Matt Matias
Herb Kanner
Allen Hanson
Dan Liston
Chester Hadley



Bay Area Atari Users Group, PO Box 4637, Santa Clara, CA 95054

BBS:
Robert Kaczanowski
Jeffery Komori
Robert Hosler
Michael King

(408) 986-0215
President
Vice President
Treasurer
Secretary



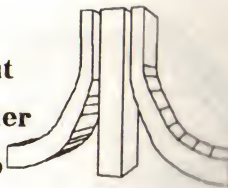
President	James Gilreath	(205) 854-1075
Vice President	Todd Price	(205) 787-8208
Librarian	Dennis Evans	(205) 923-8756
Treasurer	Alan Brewster	(205) 591-9906

Club dues are \$15 for regular and \$25 for advanced. Advanced includes an AIM monthly disk, specify ST or 8bit. BACE meets the second Monday of every month at 7pm in the Vestavia Hills Public Library, downstairs.

For membership info, call Alan Brewster, or the Matrix BBS Conference #7 (205) 323-2016, or 251-2344, and leave a message.



Central
Connecticut
Computer
Club



B.R.A.C.E. (Bluegrass Region Atari Computer Enthusiasts) meets the third Tuesday of each month from 7:00 P.M. - 9:00 P.M. in Conference Room B (located on the 4th floor), of the downtown branch of the Lexington Free Public Library. The current membership dues are \$15.00 per year for an individual membership, \$20.00 per year for a family membership, and \$10.00 per year for an associate membership (an associate membership includes receiving the monthly newsletter (AIM), but excludes the use of the library).

President Hal Nason (606)269-8989
Vice President Greg Parsons
Sec./Librarian Chris Dotson

BRAG ST



Buffalo Region Atari Group for ST's

BRAG ST was founded in 1987 to serve Atari ST owners in the Western New York area. General Membership Meetings are held on the third Thursday of the month at Erie Community College North Campus, Room S-105 in the Student Center. Setup begins at 7:00 PM; Meeting starts 7:30 PM. The Board of Directors meet on the first Tuesday of the month at the Your Host Restaurant, Harlem at Sheridan at 7:30 PM. All are welcome to attend. Piracy will not be tolerated at any BRAG ST function.

BRAG ST, PO Box 1035, Buffalo, New York, 14225
Chairman Mark Pierro (716) 691-7844
Vice Chairman Ken Malark (716) 683-1272
Finances Gerry Genson (716) 877-1328
Records Joe Rogozinski (716) 877-8378
Disk Librarian Carl Barron (716) 885-4325
Public Relations Harvel Hontz (716) 689-8074
Graphics Dick Kersting (716) 839-0494

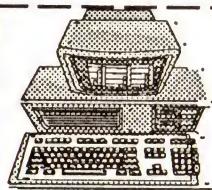


COOKEVILLE ATARI COMPUTER ENTHUSIASTS

Cookeville, Tennessee

Cookeville Atari Computer Enthusiasts—c/o Robert Pecora—280 Capshaw Drive—Cookeville, TN 38501—Cookeville A.C.E. meets on the first Saturday of the month at 1:00 p.m. at the Putnam County Library in Cookeville, Tennessee.—Cookeville A.C.E. caters to Atari ST and 8-bit computers and is supported locally by The Generic BBS, Terry Rapp - Sysop.—C.A.C.E.

President Dan Hale (615) 526-8002
Secretary Robert Pecora (615) 528-7116



CDACC CENTRAL DELAWARE ATARI COMPUTER CLUB

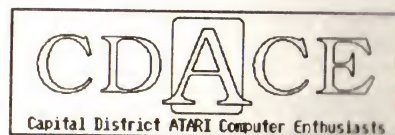
President Keith Talmund
16-bit VP Rob Styles 302-492-0305
8-bit VP Larry Catalino 302-653-8863
Sec/Treas Tom Baldwin 302-678-9411

The Central Connecticut Computer Club is the oldest, still operational Atari club in the state. Conceived in December of 1980, and operational in January of 1981, the CCCC continues to serve the Atari community. New blood is welcomed, and of course, old hands are always welcomed back.

Meetings of the CCCC are on the third Wednesday of each month. The meets kick off at 7:30 and usually include presentations or demos of various hardware or software items. The meetings are held at 127 Pinnacle Rd., Bristol, Ct. 06010

Prospective members may call Rich Scheidel (203)589-3738 or call Gary Jones (203)225-4611, or write, CCCC, 127 Pinnacle Rd., Bristol, Ct. 06010.

Dues are \$25 per year, \$30 for families. Includes Voting membership, Atari Interface magazine, access to Club library (8-bit and ST) and access to the Club magazine library.



The Capital District Atari Computer Enthusiasts was founded in 1981, is located in Albany, N.Y. and serves Albany, Schenectady, Rensselaer, Saratoga and surrounding counties in upstate New York. XL/XE meetings are currently held four times a year on a quarterly basis and ST meetings on the last Wednesday of the month. CDACE meetings are held at the Computer Cellar, located in Westgate Plaza, Albany, N.Y.

The club has extensive public domain libraries for both computers which are available to members beginning at 6:30 PM on meeting nights. ST disks are priced at \$2 while the XE library continues to remain free to all members.

Dues are currently \$20 per year for each family. This includes a subscription to AIM magazine, full access to the club BBS, and our monthly newsletter. The club actively promotes the use of all Atari computers through demonstration and application and welcomes non-members as well as members to visit a meeting and share ideas.

President Bob Thompson 518-439-5356
ST VP President Joe Pasquini 518-426-3509
XE VP President Ian Herrick 518-432-8513
Secretary Bill Crowley 518-371-0416
Treasurer Joe Bogaard 518-785-4071

CRAG

Calumet Region Atari Group

CRAG—Calumet Region Atari Group, PO Box 10995 Merrillville, IN 46411, is a club for users of the Atari ST, STE, and Mega ST computers. CRAG meets on the second Wednesday of every month at Broadway Music, which is located in Greentree Plaza, at 1509 W 81st (US 30), Merrillville, IN. Meetings begin at 7PM.

Membership in GRAG is open to anyone. Dues are \$15 a year and entitle you to a subscription to Atari Interface magazine, as well as discounted prices on CRAG's Public Domain/Shareware library disks. Library disks are double sided. Cost per disk is \$2.50 for members, \$4 for non-members. For more information call:

Jeff Coe (219) 663-5117
Randy Noak (219) 663-6912



Dedicated to Central Oregon Atari Users and Enthusiasts Since 1984

President Bob Stiles (503)389-5206
ST VP Jim Downes (503)382-0123
8-Bit VP Mark Hitson (503)648-0513
Secretary Marly Rickard (503)389-2032
Treasurer Glenn Dulin (503)382-3956

Address: P.O. BOX 6824, BEND, OR 97708

Our membership dues are \$12/Yr. \$1/Yr for each additional family member. We meet the FIRST SATURDAY of the month at 5:00 PM at the Ann Rita Conference Center, which lies just in front of the St. Charles Hospital on Neff Rd.



The Champaign-Urbana ST Users Group (CUSTUG) meets at 7pm on the second Wednesday of each month in the Auditorium of the Urbana Free Library at the corner of Elm and Race in Urbana, IL. Membership dues include a subscription to AIM and GLITCH and use of the commercial lending library. New members are welcome. The group supports a local BBS, Blackhawk's Keep, operating 24 hours a day at 3/12/2400 baud (1/8/N): 217-892-5512.

Henry Murphy President
Jimmie Myers Vice President
Lee Johnson Secretary/Treasurer
Tim Brumleve Librarian

CUSTUG PO BOX 3442 Champaign, IL 61826-3442

Cuyahoga Valley Atari Computer Club



The Cuyahoga Valley Atari Computer Club (C.V.A.C.C.), P.O. Box 9173, Akron, OH 44305-0173

The C.V.A.C.C. is a registered Atari user group. The C.V.A.C.C.'s interests include exchanging information and ideas for the help and enlightening of the Atari community. Twice each month club members and their guests are offered either an interesting demo or workshop on both the 8-bit and the 16-bit systems owned by the club. Dues are \$20.00 per year and will entitle members to all club benefits and activities. Each membership includes our monthly newsletter, The Password, as well as a subscription to Atari Interface Magazine. Members also receive a membership card which, when displayed at participating local computer stores, will entitle its bearer to discounted prices.

Meetings are held on the second and fourth Tuesdays of each month at 7:30pm in the basement of the First National Bank in Mogadore, Ohio.

President Don Crano (216) 376-7618
General Secretary Jim Woodford (216) 753-5689
P.R. Secretary Al Silverstein (216) 724-8836
Treasurer Ron Mullens (216) 794-1990



The Eastside Atari User Group, (EAUG), meets on the first Monday of every month, 7PM, at the Alton Square Mall Community Room, in Alton IL. All meetings are open to the public. No club dues. PD library, club newsletter EAUG-Log, newsletter membership \$18 per year. Member of the Midwest Atari Regional Council, MARC.

Eastside BBS 618-254-6077 and Garage BBS 618-344-8466. EAUG's address is 2425 Crislisa Dr, Alton, IL. Call 618-465-0342 for EAUG information.

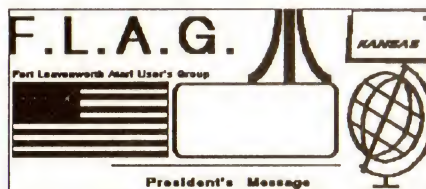
FACCS

First Atari Computer Club of Spokane

We hold our meetings the second Thursday of each month, at Eager Beaver Computers, located next to the Garland Theater. Meetings start 7PM. All visitors are welcome, so come check us out.

With the \$15 per year family membership, you will receive our club's newsletter (AIM) as well as access to our PD library. Since we currently have renewal dates scattered throughout the year, please check your card for your expiration date. To prevent any interruption in services please renew by the expiration date on your card. For more information contact any of the officers or write to FACCS, PO Box 5121, Spokane, Wa. 99205

President Tim Osborne (509) 624-1917
Classic Vice-President Glenn Bruner (509) 328-2177
ST Vice-President & Lib. Greg Morse (509) 328-1013
Treasurer Norm Iverson (509) 253-4733
Secretary Nancy Prevost (509) 456-0506
Classic Librarian Ed Hicks (509) 922-1244
Newsletter Editor Merry Iverson (509) 253-4733



President Jeff Yoe (913) 682-2883
Vice President Jeff Barker 682-9253
Treasurer Jim Muri 651-0600
BBS Sysop Dave Hagan 682-2452
Librarian J.D. Johnston 682-2883

FRACUS Fresno Regional Atari Computer User Support

FRACUS (Fresno Regional Atari Computer User Support)

President Tom Hancock (209) 885-2817
Vice President Phil Kasson (209) 221-1623
Treasurer Greg Jennes (209) 348-0759
Secretary Dianna Sikes (209) 251-3252

The FRACUS user group meets the last Saturday each month, at 6PM, at the Four Seasons Mobile Home Park Rec. room in Fresno, CA. We have a large public domain library with over 400 programs. The club also has a 24hour BBS. All 8bit Atari users are welcome to our meetings and to use our BBS (members have an additional sig on the BBS). Dues are currently \$20 annually or \$5 quarterly which includes a subscription to AIM and issues of our periodically published newsletter. We currently have 16 active members and are continuously growing.



GRASS meets the first Wednesday of every month at the Wyoming Public Library, 3350 Michael S.W.. Doors open at 6:30, meeting starts at 7:00pm. Dues are \$22.00/yr. including AIM. Bring in one PD software disk and get 2 blank disks for your time.

Tim Feenstra President (616)249-9742
2239 Collingwood SW., Wyoming, MI 49509

**G.T.A.U.G.***The Newsletter of the Golden Triangle Atarians*

The GTAUG has been 'around' since 1981 and supports both the 8-bit and 16-bit communities. Meetings are held the first Tuesday of each month at a location announced in the previous meeting.

At present our dues are \$24 per year (Our year begins in September.) and is pro-rated at \$2 per month for new members the first year. Since our nearest dealer is 90+ miles away, it is imperative that we support each other. It is for this very reason our group is a fairly close and diverse. We support all facets of Atari computing from 8-bit to Spectre/Mac to IBM and MIDI.

President	Carl Neblett	(409)755-6535
Vice President	Bob Lisle	(409)832-5659
Treasurer	Charles (Butch) Foster	
Secretary	Joe Bryant	(409)839-8645
Ass Secretary	Carlton Trimble	
Asst Secretary	Lynn Simon	
Librarian	Ray St.Cyr	
Key Master	Terry Booth	
BBS Number		(409)722-6526



The Houston Atari Computer Enthusiasts meet on the fourth Wednesday of the month, 6:45pm at the Health Economics Corporation, 2400 West Loop South, in Houston, Texas. The club supports all Atari computers from the 400 to the Mega4.

Membership is \$22 per year, and gives full access to our BBS (713) 458-9923, access to our disk, magazine and newsletter libraries, a subscription to AIM, and our local news journal UPDATE ATARI. There are also other benefits, such as store discounts, door prizes, workshops, telephone help when you have problems, and much more! For more information, please contact one of our officers or drop us a line!

HACE, P.O. Box 460212, Houston, TX 77056

President:	Bill Kithas	713-855-0815
Vice President:	John Hauser	713-458-0595
Secretary:	Bob Leeper	713-665-3229
Treasurer:	Jim Salmon	713-879-8119
Newsletter Editor:	Tracy Webber	713-981-5343



Jersey Atari Computer Society, P.O. Box 710, Clementon, NJ 08021 BBS: (609) 346-1224. The Jersey Atari Computer Society is the oldest and most experienced user group in the South Jersey/Delaware/Philadelphia area, having been formed in 1983.

The regular JACS meeting is usually held on the third Tuesday of each month, at the Camden County Library from 7 to 9 PM. The regular monthly meeting includes topics of interest for users of all Atari 8-bit & 16/32-bit computers. Yearly membership dues (August, 1990 - July, 1991) are \$24. As a JACS member, you'll receive a subscription to Between Bytes and AIM, and full access to our 24-hour bulletin board.

JACS public domain disk libraries (for all Atari computers) includes over 200 disks. Send a stamped, self-addressed business size envelope to receive a copy of our current disk catalog - please specify 8-bit or ST!

Pres & BBS Sysop	Mike Hopkins	783-1423
ST Vice P& Member	Al Gurete	596-7567
8-Bit Vice President	Robert Ely	989-8767
Treas & ST Librarian	Forrest Blood	764-0857

KAUG
Kent Atari User's Group

The Kent Atari Users Group meets on the fourth Tuesday of each month from September thru to May. Meetings are generally held at the North Maple Village Mall on #40 Highway just North of Chatham, Ontario.

Our club dues are \$20 per year with the opportunity to subscribe to A.I.M. We support both the 8-Bit and ST which gives you access to both an 8-Bit library and an ST library. Disks are \$4.00 (Canadian) for the ST and \$3.00 for the 8-Bit. Non members, add \$1.00 per disk extra.

You can reach us thru the KAUG BBS at (519) 351-3901 anytime, or phone Channel One (519) 351-0760, Monday thru Friday from 10:00am to 9:00pm and Saturdays 10:00am to 6:00pm.

Everyone is Welcome. "Bring a Friend"



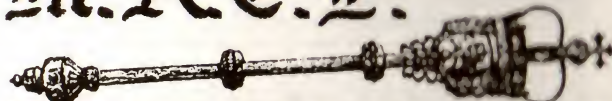
The Layton Atari Computer Enthusiasts (L.A.C.E.) membership cost \$20 per year. Privileges include the AIM Monthly Magazine, access to the 8-Bit and ST club libraries, monthly meetings, help and friendship. If you are presently not a LACE Club member and wish to join contact the one of following persons or write to LACE, c/o Irwin Brooks, 3897 So. 2275 W., Roy, UT 84067-3515.

Mike Mormando	President	(801)731-1516
Doug Hansen	Vice President	(801)393-6849
Ken Karchner	Secretary/Treasurer	(801)776-8015
Richard Clark	8-Bit Librarian	(801)392-4450
Kelly Knecht	ST Librarian	(801)773-5652
Irwin Brooks	Publications Coor	(801)731-1516

The LACE Club Meets in the basement of the Clearfield Library second Wednesday/ month at 7 p.m.

**Long Island Atari
Users Group**

Long Island Atari User Group, PO Box 92, Islip, NY 11751. For information, contact John Aalto at 516-589-6754 or call STAR Scan BBS at 516-399-4252.

M.A.C.E.**The Michigan Atari Computer Enthusiasts**

Members of MACE receive, as part of their dues, Atari Interface Magazine. Members are also entitled to purchase disks from the 8-Bit and ST public domain software libraries. 8-Bit disks are \$3 each, and ST disks are \$4 each. As an added bonus, if you purchase three (3) disks from either library you will receive a fourth disk of your choice at absolutely no cost. Non-Members may purchase disks at a slightly higher rate. Mail order is also available.

For a catalog of current disks in our libraries, send \$2 to:

MACE, P.O. Box 2785, Southfield, MI 48037

MACE meetings are held on the Third Tuesday of each month at the Southfield Civic Center at 7:30pm. The Southfield Civic Center is located at 10 1/2 Mile and Evergreen Rd, one half mile south of the Evergreen exit on the new I-696.

Meetings are in the small pavilion, room 115. Parking is available in the parking garage below the pavilion or in one of the many parking lots on the Civic Center grounds.



MID-OHIO ATARI USER GROUP



Mid-Ohio Atari User Group (MAUG)

MAUG meetings have returned to A&B Computers, 1151 Park Avenue West, (West Park Shopping Center) Mansfield Ohio, from 7:00pm until 9:00pm, on the third saturday of each month (except July). If you are unsure on how to get there, call A&B at (419) 529-9999. If you have questions relating to MAUG, call Chuck Steinman at (419) 529-2478 (after 5pm).

ST and 8-bit downloads for MAUG members have returned to the DataQue Support board, so check them out! Included are the most recent AIM ST and 8-bit disks of the month, and other interesting files. Only MAUG members in good standing have access to these files, so make sure your have your dues paid! The DataQue support board runs 24 hours, 300-2400 Baud, and the number is (419) 529-5197. Make sure you indicate you are a MAUG member so that MAUG access will be granted.

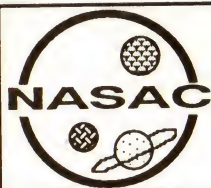
General topics of discussion at the montly meeting are the contents of the AIM disks, recent news and events. Of course demonstrations of new hardware and software are appreciated!

Middle
Georgia



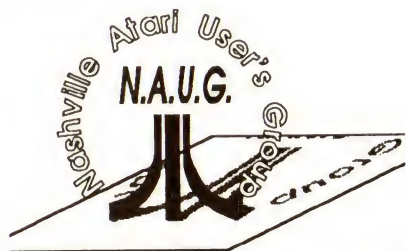
Atari
Users
Group

The Middle GA Atari Users Group is the sole Atari Club in the Middle Georgia area. We are composed of 43 members of which approx. half are ST users. Club president Pete Miller can be reached by phone at 912-328-8758. The MGAUG address is 115 Feagin Mill Rd., Warner Robins, GA 31088. MGAUG meets the second Sunday of each month at 1 PM at the Warner Robins Library. Annual dues are \$6 with the newsletter optional. Use of the club library is free to all paid members.



**NORTHMONT
Area Systems
of
ATARI
Computers**

Northmont Area Systems of Atari Computers, NASAC
Terry Browne President



Nashville Atari Users' Group P.O. Box 121752 Nashville, TN 37212. NAUG meets on the third Thursday of each month from 7PM to 10PM at the Cumberland Museum and Science Center. Membership dues are \$24 per family for the entire year. With your membership you will receive our local newsletter, Atari News, a subscription to Atari Interface Magazine, access to the club's 8-bit & ST Public Domain/Shareware libraries, any group discounts on products, and entrance to all club related functions. We have an Associate Membership for \$12 per year. With this membership, you will receive Atari News, AIM and access to our 8-bit & ST PD/Shareware libraries. People joining during or after the month of July pay 1/2 the yearly rate. Visitors are welcome to all meetings.

President & Editor Walt Sullivan (615) 228-7353

O-ACEs



O-ACEs is a non-profit group interested in getting more out of Atari computers. We are NOT affiliated with Atari Corp. or any other commercial organization -- we are there for YOU! We cover BOTH 8-bit (including the 400/800, XL, XE, and XEGS series) AND 16-bit (ST series) Atari computers. We meet twice each month (except November and December) on the 2nd and LAST Wednesday each month. Doors open by 7:30 pm at La Vista Recreation Center, 8116 Parkview Blvd. (just off 84th Street, south of Food-4-Less and east of 84th at the light)

FIRST MEETING: (2nd Wednesday) Covers news, views, and decisions that ALL members might be interested in. FOCUS MEETING: (LAST Wednesday) Concentrated information on a single topic (such as word-processing, spreadsheets, music composition, desktop publishing, etc.) Call 592-5427, for more info on O-ACEs!

PAC

Portland Atari Club PO Box 1692, Beaverton, OR 97005
President David Hunt 286-6276
Vice President Ben Smith 256-9974
BBS ACE of America 285-4417



PORTS ATARI
P.A.C.E.
COMPUTER ENTHUSIASTS

President	Tracy Hendershot	525-1058
Vice President	Larry Nadeau	525-7430
Sec/Treasurer	John Zupansic	394-9326
ST Librarian	Don Henricksen	729-6309
8bit Librarian	Don Pfeiffer	724-0563

Membership to PACE is \$30 ST and \$20 8bit per year or \$9 per quarter. Meetings are held at 6:30pm on the third Sunday of every month. Membership includes a monthly newsletter, FREE Disk-of-the-Month, FREE printer ribbon re-inking, and FREE copying privileges to our VAST collection of 8/16 bit Public Domain programs. Ports A.C.E. is an alliance of families with a mutual interest in the Atari 8/16/32bit Computers. PACE hardware assets: 130XE, 1050 Drive, MacInker and a 520STfm. Any written correspondence should be addressed directly to Ports A.C.E., Tracy Hendershot, 4835 Crosley Avenue, Duluth, MN 55804.



PHAST - Phoenix Area ST

The PHAST monthly meetings are held on the second Saturday of every month at Devry College 2149 W. Dunlap Ave. Phx, Az. from 10 to 12pm in room #101.

President	Michael Aubrey	
Vice President	Paul Ihms	
Treasurer	Wayne Myers	(602)264-5737
Member Sec./Sgt. at Arms	Mike Zachary	(602)273-1185
Disk Librarian	Dave Thorson	(602)954-6033



P3Atari Computer Enthusiasts (P3ACE)

Serving the Colorado Springs, Colorado Atari community since 1982. PO Box 17779, Colorado Springs, CO 80935

President:	Rick Reaser,	380-8082
VP ST:	Terry Quinn	548-1954
VPXE:	Dave Koster	550-1410
Treasurer:	Sam Cherry	528-5071
STLibrarian:	Rick Mount,	596-8631
XELibrarian:	Dan Rumery	392-3568
Editor:	Steve Leser	591-6062

RJLCC

ROCKFORD ATARI COMPUTER CLUB

WE'RE NOT JUST PLAYING GAMES ANYMORE!

Rockford Atari Computer Club is comprised of avid, dedicated users of all Atari computers. We support and promote the use of 8-BIT, and ST/MEGA machines with extensive PD libraries, monthly meetings, and semi-regular SIGS.

We have had a change of meeting place this year, as our previous site is being used for adult education on Saturdays. We may be able to secure a regular space there, if we can agree to meet at some other time/day (possibly evenings?). Any suggestions, or other alternatives should be mentioned at the meeting. Our regular business meeting is held from 9 to noon, the third Saturday of the month.

We have accepted the gracious hospitality, of the Springbrook Congregational Churches as an alternative meeting place. It is located, off Alpine, just as you make the turn onto Springbrook road, from Spring Creek road. Our mailing address is 3902 15th Avenue 1 - Rockford, IL 61108. Our phone number is [815] 397-5316.



Rushmore Atari Computer Enthusiasts

9512 A Adams Dr. Ellsworth AFB, SD 57106

The Rushmore Atari Computer Enthusiasts is a nonprofit organization of Atari computer owners not affiliated with Atari Corp. Meetings are held on the fourth Saturday of each month, 2pm, at the Rapid City Public Library. Annual dues are \$12 for basic membership and \$15 for membership and newsletter (subscription to AIM!). RACE offers the Black Hills Atari owner hardware and software support and the largest library of public domain Atari software in the State of South Dakota.

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President	Rick Burton	(605)-642-5353
V. President	Duane Charter	(605)-923-3274
Secretary	Joe Weigel	
Treasurer	Ken Kayl	(605)-343-7289

RATTLESNAKE ATARI COMPUTER ENTHUSIASTS

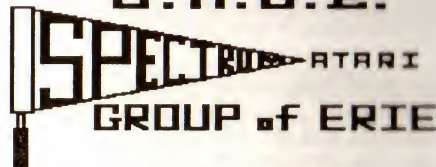


Rattlesnake Atari Computer Enthusiasts, PO Box 364, Frenchtown, MT59834. For more information, call Tom Tucker at (406) 626-4410. RACE meets the 3rd Sunday at Nat'l Guard Armory at 7PM.

R.A.C.E.

President	Lewis Midyette	828-4319
Vice President	Eric Schofield	851-5134
Secretary	Don Nelson	942-2764
ST Treasurer	Tony Manino	851-8092
8-bit Treasurer	Arthur Katz	881-0247
BBS SYSOP	Robert Yates	552-7053

S.A.G.E.



SAGE, PO Box 10562, Erie, PA 16514-0562

The Spectrum Atari Group of Erie, PA was founded in December of 1984 to provide communication and support among owners of all Atari computers. Our newsletter is the SAGE Scroll which is published monthly. In addition to being distributed to all of our members, the Scroll is exchanged with over 50 other Atari computer user groups nationwide. SAGE maintains extensive libraries of public domain software for both the Atari 8-bit and ST computers.

The Spectrum Atari Group of Erie meets on the third Sunday of each month at 2 PM at St. John's Lutheran Church in Erie, PA. We also have SIG meetings monthly covering Telecomputing, the ST/Mega/TT computers and programming in GFA BASIC.

President Dennis McGuire 814-833-4724

Vice-President Patti Irwin 814-825-0834

SCAT

SUBURBAN CHICAGO ATARIANS

AN INDEPENDENT COMPUTER USERS GROUP

SCAT (Suburban Chicago Atarians)

SCAT general meetings are held on the third Saturday of each month at 10AM, unless otherwise indicated on the SCAT BBS. The location for the meeting is College of Dupage, Student Resource Center, Lambert Road between Roosevelt and Butterfield Roads, Glen Ellyn, IL. SCAT is a not-for-profit computer group for the purpose of helping people better understand and utilize Atari 8 Bit/16 bit/32 bit series of computers for business and pleasure. Meetings are open to all.

Membership dues are \$20 per year per family. Membership benefits include subscription to Atari Interface magazine (AIM) and special club events. SCAT and AIM are not affiliated with Atari Corp. in any way.

Anyone wishing to become a member can just come to a meeting and sign up or call SCAT's 24 Hour Bulletin board (708) 231-7227 or write SCAT, P.O. Box 72266, Roselle, IL 60172



General Meetings are the 3rd Monday of each month at the North Park Recreation Center Social Room, 4044 Idaho Street at 7pm. ST/8-bit workshop meetings are on the 1st Thursday of each month at the North Park Adult Center, 2719 Howard Street at 7 pm. All meetings are open to the public.

Annual SDACE subscription dues are \$18 which includes increased BBS access, AIM subscription, and reduced rates on the Disk of the Month. SDACE's address is PO Box 900076, San Diego, Ca 92190.

President	Michael Bergman	(619)558-7866
Vice President	Danny Rickey	(619)565-2179
Treasurer	Steve Dato	(619)565-2588
Sec/Newsletter Ed	Vladimir Vooss	(619)534-4593

SEVAC

South East Valley Atari Connection meets the third Saturday of each month at 10 AM at 3234 S. Fair Ln. (Eaton Business Park, just off of 48th Street and Southern), Tempe, Arizona. Yearly membership is \$12.00. Membership includes reduced prices on PD ST and 8-bit libraries and monthly newsletter.

President	Marc Dyer	(602) 897-0314
Vice President	John Rojewski	(602) 869-0438
Treasurer	Lee Whiteside	(602) 962-9415
Secretary	David Lyle	(602) 993-2043



SPACE, the Southcentral Pennsylvania Atari Computer Enthusiasts meet on the third monday of the month at the Camp Hill Mall Community Room. The doors open at 7:00 and the meeting begins at 7:30. Dues are \$15.00 per year and includes a subscription to AIM and SPACE Probes, our official newsletter.

SPACE was founded in 1982 and is still going strong. We support both ST and 8-bit computers.

For more information, call either John Slade, President at (717) 938-3656 or John Hileman, Newsletter Editor at (717) 938-8753 or write to: SPACE, PO Box 11446, Harrisburg, PA 17108.

Here is a list of upcoming meeting themes:

August 19 - Word processing, spell checkers.

September 16 - Sports on the computer

October 21 - The public domain



The Sacramento ST users group supports the ST and TT family of computers and meets on the second Wednesday of every month at the Pac Bell auditorium at 2700 Watt Avenue. The meeting starts at 7p.m. with an informal beginners session with the regular meeting starting at about 7:25.

Dues are \$24 a year and membership benefits include, the club's newsletter, full access to the club sponsored bbs, a free raffle ticket at every general meeting, membership disk, access to our extensive disk library for a extremely reasonable rate and a subscription to AIM.

President	Mark Warner	(916)344-1150
Vice-President	Keith Keljvik	(916)334-6130
Treasurer	Steve Kipker	(916)661-1234
Disk Librarian	Ric Kalford	(916)723-0237
Membership	Robin Meriano	(916)332-5840
Midi Sig	David Bachman	(916)452-2105
ST-KEEP BBS	(916)339-0726	(916)729-2968



The Saginaw/Tri-City Atari User Group meets the last Saturday before the 18th of the month, at 9 am, at the Rudy Zauel Memorial Library, on the corner of Center and Shattuck in Saginaw Township, Michigan. Upcoming meetings are September 14th, October 12th, November 16th, and December 14th 1991.

President	Bryant LaFreniere	(517)835-2234
ST Librarian	Jim Fleming	793-9792
Treas/Secretary	Marty Schmidt	792-6029
8 Bit Librarian	Ted Beauchamp	686-8872

Club dues are still only \$20.00, which provides support for both the 8 Bit and ST, and full access to the club's Public Domain library, disks are \$3 for a double-sided disk packed full of goodies (2 for \$5, what a bargain!). Check your mailing label, if you need to renew, (or haven't joined us yet!). A free PD disk is included with each new membership or renewal! DO IT NOW!



President	Claudette Tishcler	226-5644
Vice-Pres	Gary	521-2855
Treasurer	Kathi Koenig	892-0881
Newsletter Ed	Joseph Adato	449-6881
Disk Librarian	Barbara Carlstrom	371-2732

The ST Atari North Coast Enthusiasts (STANCE) is an independent, not for profit Atari computer user group and is not affiliated with Atari Corporation, or any of its affiliates, in any way.

\$12 per Year with a one time sign up fee of \$13.00.

STANCE club meetings are held every third Monday of each and every month at B & G Electronics, (located at 15729 Madison Ave., Lakewood, Ohio 44107) starting at 7:15PM

ST ★ R ST ATLANTA ROUNDTABLE

STAR (ST Atlanta Roundtable) Atlanta, Georgia, meets the third Monday of each month at 7PM. Membership dues are \$30 per year. Each member receives a copy of AIM and PD disks. Bring a friend.

President	Rick Ostapower	404-487-4845
V.P. & Editor	David Westbrook	404-426-8954
Tres & Mbrshp	Stephen Embry	404-923-4828
Librarian	Tommy Mersinger	404-938-2718

ST A. R. R. Road Runners

THE #1 STAM USER GROUP IN THE NEW HAVEN (CT) AREA

ST Atari RoadRunners (ST.A.R.R.) has held elections and the newly elected officers are as follows:

President	Madelon Wilson	(203) 735-6711
15 John St., Ansonia, CT 06401		
Vice Presiden	Leo Taylor	(203) 387-9658
Treasurer	Robert Hueffman	(203) 421-3864
Secretary	Roger Erikson	(203) 481-3326
ST.A.R.R. BBS		(203) 421-4861

Membership in ST.A.R.R. includes a one-year subscription to A.I.M. and access to a large public domain library. Membership dues are \$20 per year, and membership is open to all interested users. We meet on the third Thursday of each month (except August) at The Greater New Haven State Technical College, 88 Bassett Road, North Haven, CT. Mailings should be directed to one of the officers listed above.



The ST Users Network -- supporting users of the Atari ST, Mega, and newer technology Atari computers. Open meetings are held on the 3rd Wednesday of each month at 7P.M. in the Murray High School. Send correspondence to: STUN, P.O. Box 27285, Salt Lake City, Utah 84127.

President	Randy Larsen	(801)967-0209
Vice President	Ray LaFollett	(801)467-6726
Secretary/Treas.	Neal Baker	(801)466-4577
Disk Librarian	Jim Hepworth	(801)964-0586
STUN's BBS "The Bolt"		(801)272-4243

Salinas Valley Atari Computer Enthusiasts

SVACE is the only Atari user group in the Monterey Peninsula area. There is a free disk of the month for all attendants, please bring your own disk. Dues are \$12 per year and includes Atari Interface magazine. Meetings are at 7:30 P.M. on the first Tuesday of the month at the Salinas Community Center. Demonstrations and raffles are a regular part of our meetings.

SVACE can be contacted at 672 E. Romie Lane, Salinas, CA 93901. Anybody interested in Atari computers is welcome.

President	Gary Klugman	(408) 758-4894
Vice-President	Dale Meisenheimer	(408) 449-7750
Secretary/Treasurer	Charles White	(408) 449-8986
BitStream BBS		(408) 449-2150



The Southwest Washington Atari Group was formally created in April, 1985; prior to that, local Atari enthusiasts met on an irregular basis. The group has been holding its meetings at 6:30 p.m. on the last Sunday of the month (save July) at Clark County Fire District #5, Station 3 on 213 NE 120th, Vancouver, WA. SWAG started out with a large following of 8bit owners and as more and more members upgraded to the Atari ST, the membership has become mainly ST owners, but 8bit is still supported. Annual dues are \$12 and SWAG can be contacted at PO Box 1515, Vancouver, WA 98668.

Allan Coker	President
Steve Traxler	Vice President
Gary Lentz	Sec/Tres/Library



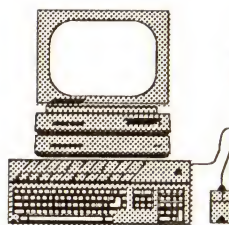
TEAC The Educator's Atari Club

Yearly membership fee of \$25 includes 6 issues of the TEAC newsletter, the TEAC Educational 8-bit Disk Library catalog and a one year subscription to Atari Interface Magazine. For more information, contact TEAC at PO Box 1024, Laytonville, CA 95454.



Tinker ACE of Oklahoma meets the first Saturday of each month at 1 PM (12:30 set-up time) in the Moore Public Library, 225 S. Howard, just off of SW 4th and I-35 in Moore. TACE can be contacted at 104 E. Northrup, Midwest City, OK 73110 or at the TACE BBS (405) 755-9561, 24 hrs., 3/12/2400 baud, running Oasis 4.3 software with over 60megs online storage. ST & 8bit support. Dues: Full - \$20, Correspondence - \$15. Dues are prorated at \$1.25/month for correspondence membership and \$1.66/month for full membership.

President/VP	Greg Ray	(405) 964-3765
Librarian	Chris Hamilton	
BBS Sysop	Rick Spencer	
Technical Advisor	Ron Hamilton	(405) 387-5649



THUNDER BAY ATARI ST ENTHUSIASTS

TASTE--Thunder Bay Atari ST Enthusiasts was formed in October, 1987 by a core of 5 ST owners interested in forming a user group to help each other and to help in publicising the Atari 16bit machine.

We grew fairly quickly to an all-time high of 20 members by January, 1990. A monthly newsletter was published, and we established a PD library. Soon after, membership began to decrease -- members were getting to know their machines better, and lack of interest in publishing a newsletter. We still have our PD library of about 70 disks, and will be adding to the list as we go along.

Thunder Bay is a city of 113,000 located on the northern shore of Lake Superior. We have one Atari dealer; he is also a dealer for the Amiga and IBM clones. Needless to say, the priority for Atari products is the lowest. We manage to stay alive monthly by mail order purchases -- unfortunate by necessary.

President, Neville Denetto, 185 Varsity Row, Thunder Bay, Ontario, Canada P7B 5P2.



Westmoreland Atari Computer Organization meets the second Tuesday of each month in the North Huntingdon Township Town House, Center Highway and Brownstown Road (just off Route 30 near the Hamilton car dealerships, Irwin, PA) at 7:30 P.M.

Founded in December, 1983, WACO boasts huge ST and 8bit PD libraries. Double-sided disks are only \$3 for members, \$4 for non-members. Disk catalogs on disk are only \$2. The \$20 annual membership (\$24 for family) now includes a subscription to AIM, as well as the vocal, consumer-oriented WACO Printout newsletter which features Z*NET. Memberships by mail are welcome.

WACO also operates the WACO Ward BBS, 300/1200 baud. The club was founded to help Atarians support each other. One of the regular features of each meeting is called 'Upload' when members share new information or ask for assistance in solving questions. Both 8bit and ST disks-of-the month are demoed as well as new hardware and software.

Since the first Taricon back in 1984, WACO has been represented at most of the northeastern Atari shows as well as having a booth at all Pittsburgh shows.



The Washtenaw Atari Users Group meetings are held every second Tuesday of the month at 7:30 pm in the Michigan Union building on the campus of the University of Michigan on State St. at the corner of S. University in Ann Arbor.

Club dues are \$15 per year and provide access to the PD library and subscription to AIM. Meetings feature demos of both 8bit and ST software and hardware. Nonmembers and questions are welcome. Officers can be contacted by calling Craig Harvey at (313) 994-5619 or by BBS at Molin's Den at (313) 451-0524.

WINDSOR AUG

Windsor Atari Users' Group

The Windsor Atari Users' Group (W.A.U.G.), founded in 1982, is among the oldest computer clubs in North America to serve the Atari community. We are an international family of Atari owners with members from across Southwestern Ontario and the state of Michigan.

Our club meets every third Thursday from September through June with the exception of December when we meet on the second Thursday so as not to conflict with Christmas scheduling. We meet at 7:30 p.m. at the Roseville Gardens Community Centre, 6500 Roseville Garden Drive, Windsor, Ontario, CANADA.

Our club dues are \$25(Canadian) per family membership. Each membership entitles you and your family to attend our regular meetings, as well as receive the AIM magazine as well as our own monthly publication, 'exSTracts'. In addition, each membership gives you access to our ever growing public domain library, packed with programming from around the world. Each club disk sells for \$4.00 (Canadian) with the occasional monthly special as offered by our club librarians.

President	Brian Cassidy	(519) 966 0305
Vice President	Len Brown	(519) 252 4572
Finance	Gary Choptiany	(519) 966 5489
Membership	Kazmir Choptiany	(519) 254 4557
Communications	Todd Latam	(519) 839 5096
Software Coord.	Larry Latam	(519) 839 5096
Library Coordinator	Kevin McMahon	(519) 944 8935
Editor	Thom Woodrich	(519) 948 5448
Associate Editor	Shawn Cassidy	(519) 966 0305
Past President	Ray Caille	(519) 734 8183



WNYAUG meets at 7:30 pm on the first Thursday of each month in room 116E, Bacon Hall at the State University College of Buffalo Campus, 1300 Elmwood Ave.

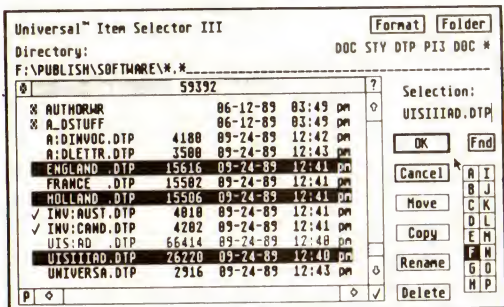
Dues are \$15 for new members and \$12 for renewing members. Send checks and correspondence to WNYAUG, PO Box 59, Buffalo, NY 14216.

President	Mike Husband	(716) 825-8486
Vice President	Kevin Packard	773-9325
Treasurer	David Shane	875-5350
Secretary	John Kasupski	
SysOp	Don Koepf	681-0564
8bit Librarian	Norm & Betty Knab	937-6974
The Wizard's Attic BBS		681-1654



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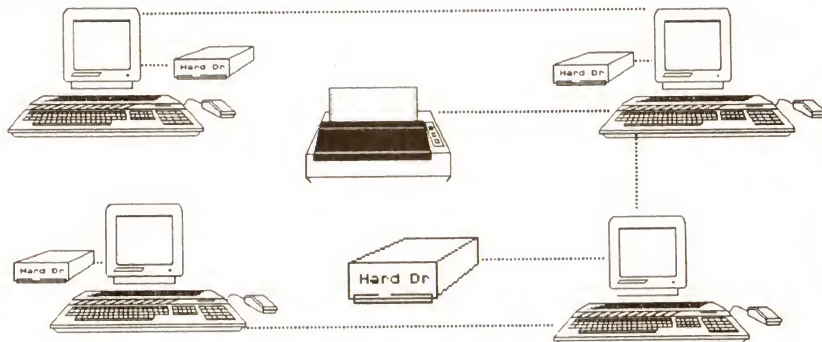
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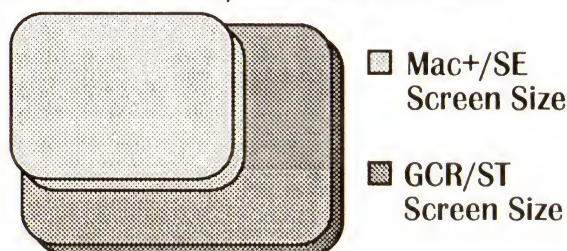
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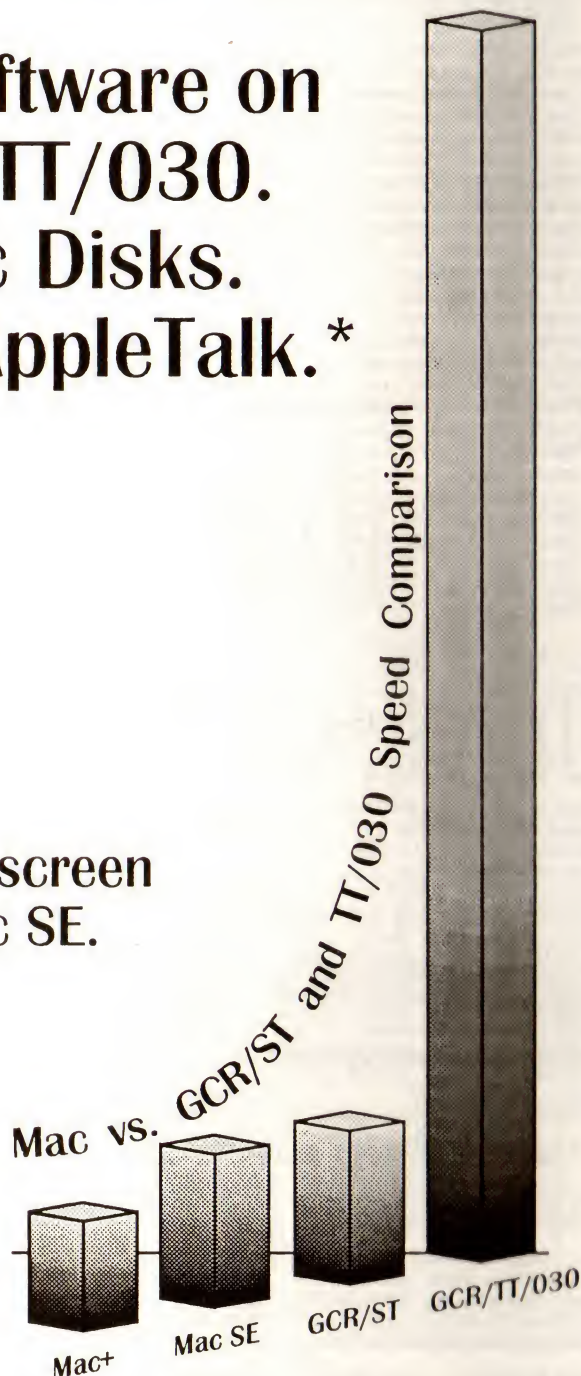
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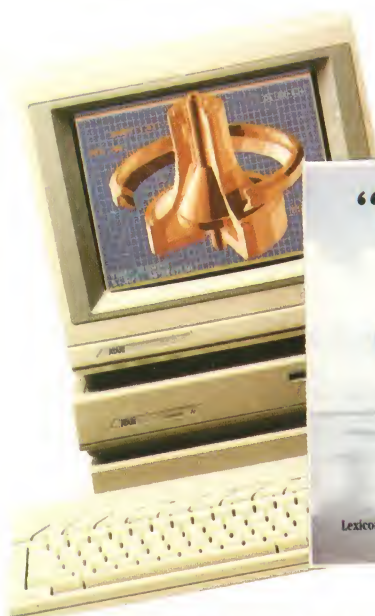
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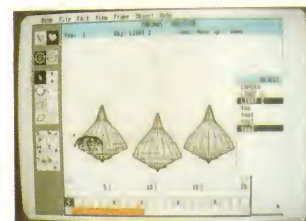
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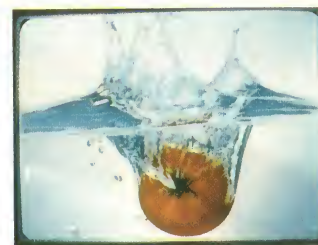
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